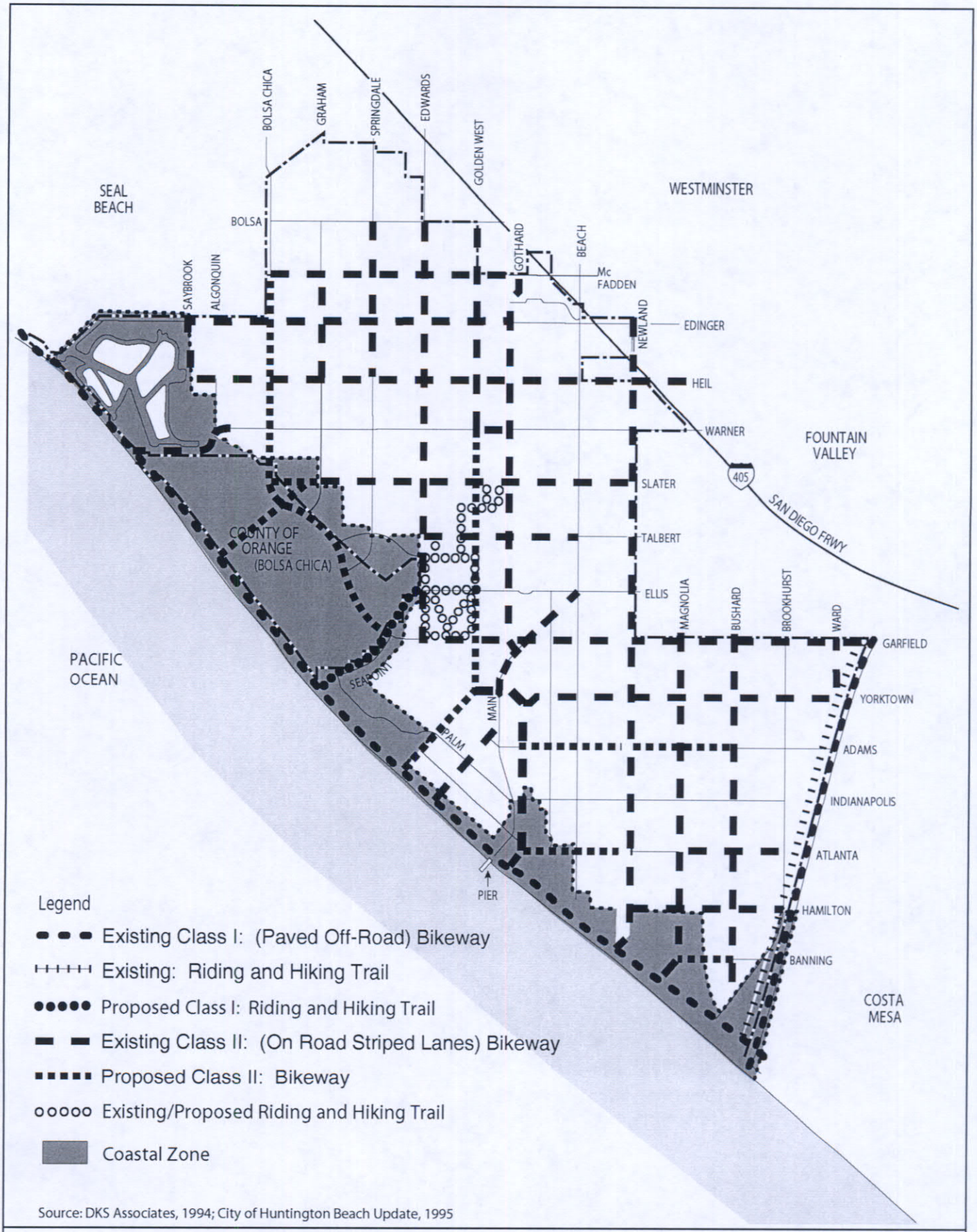


Source: DKS Associates, 1994; City of Huntington Beach Update, 1995

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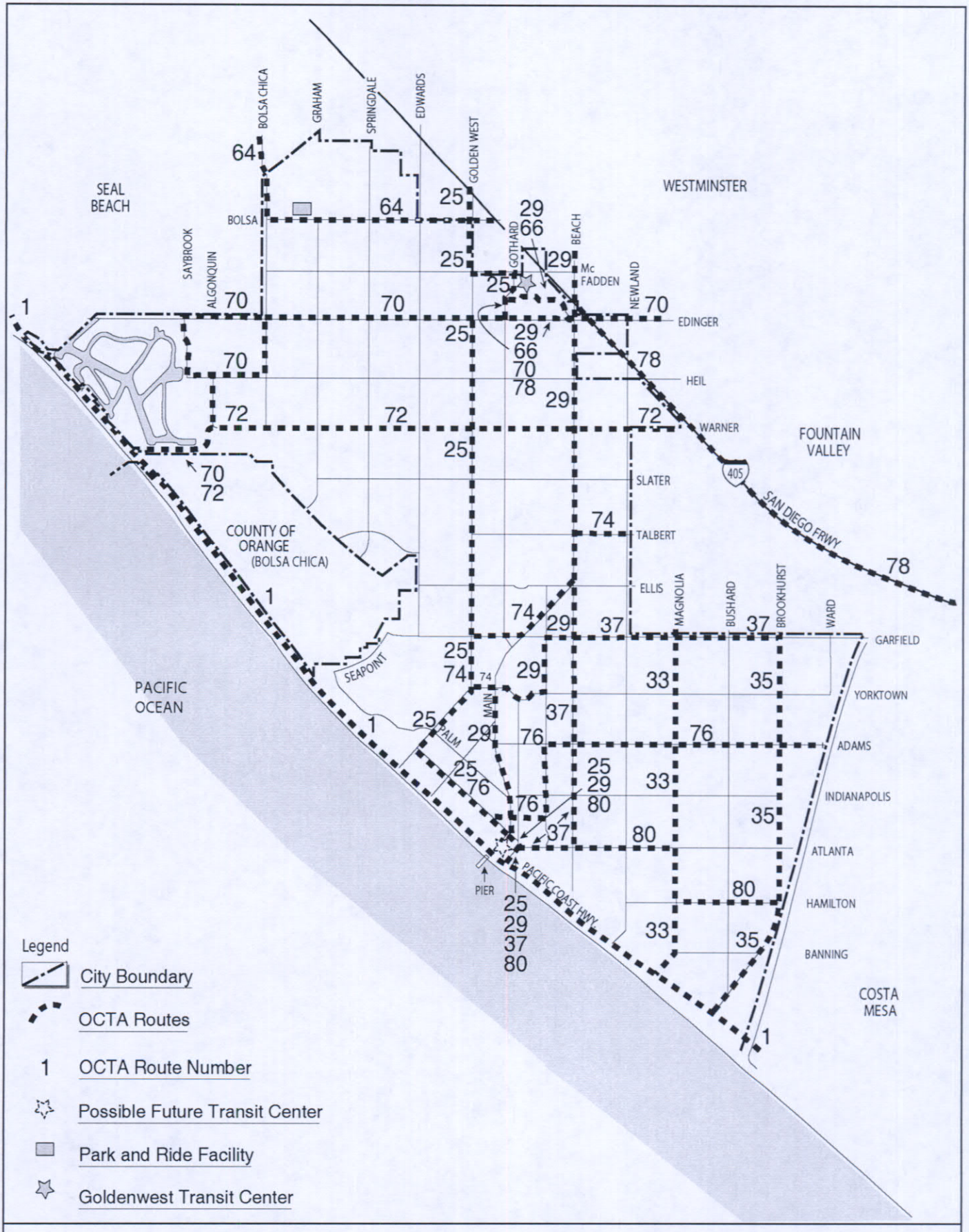
FIGURE C-14

## TRAILS AND BIKEWAYS

CITY OF HUNTINGTON COASTAL ELEMENT




# TRANSIT SERVICE ROUTES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-15

## Public Recreational and Visitor Serving Commercial Facilities

### Public Recreational Resources

Coastal Act policy promotes the protection of coastal resources while accommodating public demand for such resources. Further, Coastal Act policy promotes the protection of recreational and lodging opportunities for low and moderate income persons. Huntington Beach is known internationally for its temperate climate, excellent surfing beaches, and plentiful recreational amenities and opportunities. Consequently, millions of visitors are attracted to the City's shoreline each year (an estimated 9.6 million in 1998). As the general population grows, the demand for year round recreational resources along the coastline will also grow. Coastal Element policy recognizes the City's responsibility to balance the need to provide adequate recreational facilities to serve the greater than local community, while protecting the resources and character of its Coastal Zone. An overview of Huntington Beach's most significant recreational resources is described below. **Figure C-16** identifies the location of these resources.

***Beaches***

The City's Coastal Zone contains over nine linear miles of sandy beach shoreline area encompassing approximately 380 acres. The three beaches in Huntington Beach are Bolsa Chica State Beach and Huntington State Beach, which are operated by the State Department of Parks and Recreation, and Huntington City Beach, which is operated by the City. Bolsa Chica State Beach includes six miles of shoreline between Warner Avenue and the Municipal Pier. Huntington City Beach includes approximately one mile of shoreline between the Municipal Pier and Beach Boulevard. Huntington State Beach consists of the two mile shoreline area between Beach Boulevard south to the Santa Ana River. All of the beach area is in public ownership. The entire beach area is designated as open space in the Coastal Element Land Use Map.

Recreational opportunities at the City's beaches are extensive and include activities such as sunbathing, swimming, surfing, bodysurfing, sand volleyball, skin and scuba diving. Huntington Beach is known as one of the best surfing areas on the west coast and has hosted numerous national and international surfing contests. Its renowned surf is a result of the shoreline's long, gradually sloped beach gradient and location in relation to ocean swells. Fire rings are provided for barbecues and evening camp-fires. Offshore clam beds and a variety of game fish attract divers and surf fisherman to the Huntington Beach shoreline. In addition, the Coastal Bikeway, a regional Class I Bikeway, extends the length of the shoreline in Huntington Beach (it continues south to Newport Beach and north to Seal Beach). This paved bikeway provides for bicycle riding, jogging, roller blading, walking and similar activities separated from vehicular traffic. Proposed improvements include widening the existing Coastal Bikeway within Huntington Beach from its existing average width of 12 to 15 feet to twenty feet.

***Municipal Pier and Plaza***

The City's Municipal Pier is located at the intersection of Main Street and Pacific Coast Highway and serves as the focal point of the City's Coastal Zone. The Pier, which was re-built and opened in 1992, is 1,856 feet long, 30 feet wide and 38 feet above the mean low water level. It is constructed of reinforced concrete. It includes a variety of visitor serving and recreational amenities, including a restaurant, community access booth, lifeguard tower and observation and recreational fishing platforms. Visitors can use the Pier to sight see, stroll, fish and dine. Coastal Element policy, among other things, limits building heights on the pier to a maximum of 2 stories/35 feet. Coastal Element policy also requires that public access around the entire

perimeter of the pier be maintained. Proposed enhancements to the Pier include a funicular/trolley system to transport pedestrians from the Plaza area to the end of the Pier and back.

The Main Pier Plaza has more than eight acres of public space located at the base of the Municipal Pier on the ocean side of Pacific Coast Highway, between First and Seventh Streets. The public plaza includes a palm court, a 230 seat amphitheater, a spectator area, accessways to the beach and lawn, restrooms and concessions, bicycle parking facilities and automobile parking. Pier Plaza was designed as a community focal area where public speaking forums, surfing competitions, foot races, outdoor concerts and similar events are held.

***Parks***

Other than the sandy shoreline area itself, existing parks in the Coastal Zone include those listed in **Table C-4** below and depicted in **Figure C-16.**

**TABLE C-4**
**Coastal Zone Parks**

| LOCATION | SIZE/Acres |
|---|---|
| **Zone 1** | |
| Booster Park – Baruna and Davenport | 1.0 |
| Conrad Park – Aquarius and Trinidad | 3.0 |
| French Park – Venture @ Harbor Channel | 0.5 |
| Prince Park – Typhoon and Venture | 0.2 |
| Seabridge Beach Park – 3222 Countess | 4.5 |
| Tarbox Park – Wellington and Melville | 0.5 |
| Trinidad Beach Park – Trinidad @ Long Channel | 1.0 |
| **Zone 2** | |
| Bolsa View Park-Brighton and Crestmoor | 3.0 |
| **Zone 3** | |
| Harriett M. Wieder Regional Park | *111.0 |
| Bluff Top Park | 20.0 |
| Lower Seacliff Greenbelt-Island Bay and Palm | 0.5 |
| **Zone 4** | |
| Manning Park – Delaware and Detroit | 2.5 |
| **Total Acres** | **147.7** |

*At present, 49 acres of the 111 total are privately owned, to be dedicated, per agreement, at a later date.

Proposed parks include the Harriett M. Wieder Regional Park (formerly known as the Bolsa Chica Linear Park) and the Orange Coast River Park. Land for the Regional Park has been identified (approximately one-third has been dedicated and is in public ownership). A development plan for the park has been devised through coordinated efforts between the City and County of Orange. Once developed, the Harriett M. Wieder Regional Park will connect Central Park to the coastline via the Huntington Beach bluffs, at Seapoint and Goldenwest. The Regional Park will provide views and linkages to the Bolsa Chica wetlands as well.

The Orange Coast River Park is in the early stages of planning at this time. The present conceptual plan for the park is to link parks from inland cities to the coastline via the Santa Ana River trail. The Orange Coast River Park is proposed to extend north from the Santa Ana River, in Huntington Beach, along the inland side of Pacific Coast Highway to Beach Boulevard. Feasibility studies for the park concept are now underway. Coastal Element policy supports and promotes the maintenance and preservation of existing parks, the development of the planned Harriett M. Wieder Regional Park, and further study of the feasibility of the proposed Orange Coast River park.

***Recreational Vehicle Camping***

The Sunset Vista Camper Facility, located on Pacific Coast Highway in the Huntington City Beach parking lot at First Street, is a City-operated recreational vehicle camping site offering 150 spaces from September 15 through May 31 annually. The facility allows camping immediately adjacent to the beach sand area.

In addition, the State Department of Parks and Recreation allocates 50 spaces for enroute overnight camping at both Huntington State Beach and Bolsa Chica State Beach. Campers pay a nominal fee per night and are required to check in after 8:00 p.m. and leave by 9:00 the following morning. The RV spaces made available under this program are for year-round use. The City Beach also offers a similar program for enroute RV camping between June 1 and September 14, annually. Coastal Element policy promotes the preservation of these opportunities and expansion of the camping program at the State beaches to mirror the overnight program permitted at the City beach parking lot.

***Trails and Bikeways***

The City boasts an extensive trail system that can be used by bicyclists, roller bladers, joggers and strollers. The Coastal Zone includes a Class I trail that runs the entire length of the Coastal Zone and is linked to regional bikeways. It also includes several east west bikeways that access the City's Coastal Zone, and a major trail along the Santa Ana River. In addition, the County has plans for a future riding and hiking trail that will extend from the existing riding and hiking trail system in Central Park, which is just outside the City's Coastal Zone boundary, along the proposed Harriett M. Wieder Regional Park to points near the shoreline. The County's Master Plan of Regional Riding and Hiking Trails identifies two regional trails within the City's Coastal Zone: the Santa Ana River Trail and the Huntington Beach Trail. The Commuter Bikeway Strategic Plan (the regional bikeways plan for Orange County) identifies three regional Class I bikeways within the Coastal Zone: the Santa Ana River Bikeway, Wintersburg Channel Bikeway and the Coastal Bikeway. (**Figure C-14.)**

***Golf Courses***

There is one private (no public) golf course in the City's Coastal Zone: Seacliff Country Club. It is an eighteen hole course located on Palm Avenue, west of Goldenwest Street.

***Huntington Harbour***

Huntington Harbour is an 860 acre residential development oriented around a network of manmade channels located in the northwest corner of the City. The channel system covers a surface area of 225 acres and houses approximately 2,300 mostly private boat slips. The waterways, which are available for public use, provide significant opportunities for boating. Access to the channels is provided in several areas where boats and boat slips may be rented, and by the City operated boat ramps (Percy Dock and Warner Dock) located near the Warner Avenue

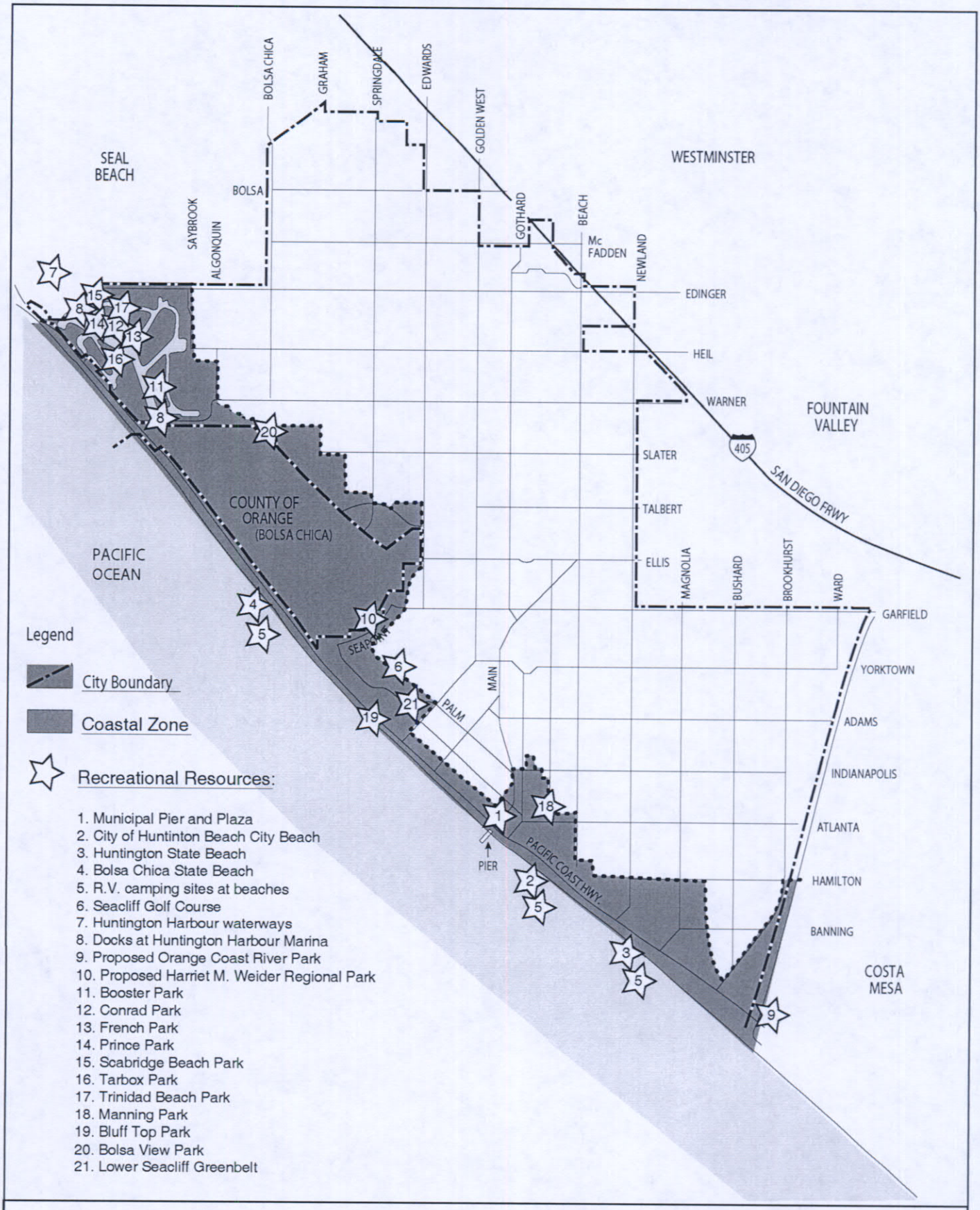
Fire Station. The Percy Dock also provides City operated parking. An additional boat ramp, French Dock, that can accommodate large boats is available at the Sunset Aquatic Regional Park immediately north of Huntington Harbour within the City of Seal Beach. The entrance to the Huntington Harbour channels is located at the northwest end of the harbor and passes under a bridge at Pacific Coast Highway.

Some of the recreational opportunities in Huntington Harbour are private, accessible only to Harbour residents. However, a number of public recreation areas are available. Trinidad Island includes a 2.7 acre greenbelt park with a bicycle/pedestrian path, two small vista parks, a fishing dock and a walkway around half the island. A 4.1 acre City neighborhood park is also located on Seabridge Peninsula. The Harbour area also includes three small beaches and parks accessible to the public.

The developed status of Huntington Harbour dictates the current state of public access in the area. In the event that new development, or significant redevelopment, fronting a channel area does occur, the City's Coastal Element policy requires that adequate public access to the waterways be provided.

***Boating Facilities***

Boating facilities in Huntington Beach are primarily provided in Huntington Harbour. Development of a second marina in the City's Coastal Zone is limited by a lack of appropriate sites. Boat storage is provided within the Huntington Harbour Marina and in off-site dry storage areas. City policy allows for boat storage on private residential property if properly screened and accommodated, as well as within industrially zoned areas.




# SIGNIFICANT RECREATIONAL RESOURCES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-16

**Visitor-Serving Commercial Facilities**

The City's Coastal Zone is host to millions of visitors each year. The Coastal Act places a high priority on land uses and facilities that serve the needs of these visitors. Visitor-serving facilities include public and private developments that provide accommodations, food, entertainment and services. The City's Coastal Land Use Plan defines activity nodes where visitor serving uses are concentrated. The use of concentrated nodes allows the City to capitalize on shared facilities and minimize impacts to more sensitive resource areas in the Coastal Zone. The most concentrated area of visitor serving uses is within the Downtown area near the Municipal Pier. Significant visitor serving facilities within the Coastal Zone are briefly described below.

***Huntington Harbour***

The Huntington Harbour area includes commercial uses to serve residents and visitors. Visitor serving commercial uses include restaurants, retail shops, entertainment and private recreational facilities such as the Huntington Harbour Yacht Club and a fitness/racquet club.

***Seacliff Promenade Conceptual Master Plan Area***

The Seacliff Promenade Conceptual Master Plan Area is bounded by Pacific Coast Highway to the south, Palm Avenue to the north, Seapoint Avenue to the west and Goldenwest Street to the east. The planning area comprises approximately 150 acres and is presently under the ownership of PLC Properties and Aera Properties. PLC Properties owns the 56 acre parcel located at the northeastern section of the site. Aera owns the remaining 94 acre portion which fronts Pacific Coast Highway. At this time, the site represents one of the largest, undeveloped contiguous areas in the Huntington Beach Coastal Zone. The planning area is designated in the Coastal Element Land Use Map as Mixed Use-Horizontally Integrated Housing (MH-F2/30(Avg. 15)-sp), which permits residential, visitor serving commercial and open space uses. A specific plan or plans, as well as, a "conceptual master plan of development", consistent with the Coastal Element Land Use Map, are required before any development may be approved on the site.

Per the site's Coastal Element Land Use Map designation, commercial uses will be limited to those permitted by the Commercial Visitor land use category. (See Table C-1, Coastal Element Land Use Plan Land Use, Density and Overlay Schedule, and Table C-2, Community District and Subarea Schedule). The amount and precise location of commercial land that will be included within this planning area will be determined through the conceptual master plan and specific plan preparation and adoption processes. The required master and specific plans are subject to Coastal Commission approval which would be submitted to the Coastal Commission as an LCP amendment that would take effect upon Commission certification. Both are consistent with Coastal Act and adopted City policy noted in this Coastal Element.

Pursuant to the adopted Palm/Goldenwest Specific Plan, it is anticipated that the 94 acre Aera property, which fronts Pacific Coast Highway, will house visitor-serving commercial, open space and recreational/civic uses such as a public museum, with visitor-serving commercial uses having preference. This property is presently used for oil production and is expected to maintain its existing oil activities for the next 15 to 20 years. The 56 acres located in the northeast portion of the planning area and owned by PLC Properties, is approved for up to 315 dwelling units.

***Downtown***

The downtown area has been designed as the primary visitor serving node in the Coastal Zone. Development of the area is guided by the Downtown Specific Plan. Coastal Element policy promotes the continuation of the area as a visitor serving node. Significant project areas within the downtown area include the Main/Pier area, the Waterfront area and a site known as "31 acres." The Main/Pier area includes the Municipal Pier, the public plaza at the base of the Pier, adjacent restaurants, and commercial/retail development on Main Street. The Waterfront development area is located at the northwest corner of Pacific Coast Highway and Beach Boulevard. It is designated for uses such as hotels, specialty retail and residential uses. The "31-Acres" site is located on the north side of Pacific Coast Highway at First Street, just south of the Municipal Pier. This site is planned to be developed as a mixed use project including visitor serving commercial, office and residential uses. Planned and existing projects within these development areas are summarized in **Table C-5.**

**TABLE C-5**
**Existing Downtown Area Commercial Facilities**

| Existing Visitor Serving Projects Within the Downtown Area | Description |
|---|---|
| **The Waterfront Development** | |
| The Waterfront Hilton Beach Resort | 296 hotel rooms, 15,000 square feet of ballroom/meeting space, restaurant pool and fitness center. |
| **Main/Pier** | |
| Pier Pavillion | 19,100 square feet retail, restaurant and office uses. |
| Oceanview Promenade | 42,000 square feet of visitor serving retail |
| Main Promenade | 34,000 square feet of visitor serving retail, restaurant and office uses. Includes 830 space municipal parking structure. |
| Adjacent to Municipal Pier | 15,000 square feet of restaurant area. Currently houses Duke's and Chimayo's restaurants. |
| Municipal Pier | 8,000 square feet of visitor serving commercial at end of Pier. |
| Pier Plaza | No commercial uses. |
| Plaza Almeria | 301 Main Street. 30,000 square feet of commercial/retail with 10,000 square feet of office on upper stories. Also includes 42 townhomes. |
| **Approved Projects** | **Description** |
| **The Waterfront Development** | |
| The Hilton Pacific Grand Resort (Waterfront Development) | 44 acres along PCH, adjacent to existing Hilton Hotel, 530 rooms, 50,000 square feet conference center, 12,000 square feet of specialty retail and spa and a third hotel. |

***Beach Boulevard***
With the exception of the northwest corner of Pacific Coast Highway and Beach Boulevard included within the Waterfront Development area, the portion of Beach Boulevard that lies within the Coastal Zone boundary does not include existing or planned commercial uses. However, just outside the Coastal Zone, and accessible within minutes of the beach by car, bus or bicycle, Beach Boulevard includes a variety of visitor, neighborhood and regional serving commercial establishments.

***Other***
A strip of land located on the north side of Pacific Coast Highway, between Beach Boulevard and Newland is designated for visitor serving commercial uses in the Coastal Element Land Use Plan. (The site presently houses the Action Boat Yard and is partially vacant.) A half block area on the inland side of Pacific Coast Highway, between Sixth and Ninth Streets, is designated as Mixed Use-Vertical. The site is presently vacant.

## Visual Resources

The Coastal Act requires that the scenic and visual qualities of coastal areas, especially natural landforms along bluffs and cliffs, be considered and protected as a resource of public importance. Huntington Beach's Coastal Zone includes several visual resources that contribute positively to the aesthetic character of the Coastal Zone, including views, natural landforms and man-made amenities **(Figure C-17)**. The City's Coastal Zone also includes facilities and sites that negatively impact the visual character of the area and detract from existing assets. The Coastal Element includes policy to protect the assets and mitigate or remove the visual detractors.

**Assets**
***The Pacific Ocean***
The Pacific Ocean is Huntington Beach's most prominent visual asset. Views of the ocean from Pacific Coast Highway, peripheral streets, and surrounding neighborhoods and districts enhance the visual quality and ambiance of the City and help orient the traveler.

***Huntington Harbour***
Huntington Harbour is a visual asset to those residences that front the channel. The concentration of recreational boats and related activity on the waterways provides scenic resources not found elsewhere in the City's Coastal Zone. Although limited access makes this asset somewhat exclusive to area residents, public access is provided to visitors. Private views are not protected by the Coastal Act or Huntington Beach Coastal Element policy.

***The Bolsa Chica Ecological Reserve***
The Bolsa Chica Ecological Reserve is located in the unincorporated area of land known as the Bolsa Chica. It is a lowland that lies between two mesas. The visual quality of the wetland marshes and natural wildlife create an impressive corridor along Pacific Coast Highway generally located between Seapoint Street and Warner Avenue.

***The Bolsa Chica Mesas***
The northwestern side of the Bolsa Chica Ecological Reserve includes bluffs that rise to an upland area known as the *Bolsa Chica Mesa*. These bluffs are primarily under the County's jurisdiction (only a small part of the bluff lies in the City) but are within the City's Sphere of Influence for potential future annexation. The mesas constitute a significant scenic resource

within the City's Coastal Zone. The 50 acre site (located west of and adjacent to Graham Street and north of and adjacent to the East Garden Grove Wintersburg Orange County Flood Control Channel) known as the "Parkside" site affords an excellent opportunity to provide a public vista point. A public vista point in this location would provide excellent public views toward the Bolsa Chica and ocean. Use of the public vista point will be enhanced with construction of the Class I bike path along the flood control channel and public trails throughout the Parkside site.

To the southeast of the Bolsa Chica Ecological Reserve, another line of bluffs extends between Pacific Coast Highway and Edwards Street. The bluff top area here is known as the *Huntington Beach Mesa* and is the site of the proposed Harriett M. Wieder Regional Park.

***Beach Bluffs***

A line of low, steep bluffs runs along the face of the beach, on the south side of Pacific Coast Highway, between Seapoint south to approximately the Pier Plaza area. Panoramic views of the ocean, coastline and Catalina Island can be seen from the bluffs and from several locations on Pacific Coast Highway where the road rises above the adjacent bluff line.

***The Municipal Pier***

The Huntington Beach Municipal Pier affords fine views of the shoreline, ocean and islands. To maintain public views, Coastal Element policy limits heights of buildings permitted on the pier to a maximum of 2 stories/35 feet. In addition, the entire perimeter of the pier is required to be maintained for public access. Aside from affording views to the ocean, the Pier structure itself is considered to be a visual resource.

***Wetlands***

The wetland area north and adjacent to Pacific Coast Highway between the electrical generating plant and the Santa Ana River, known as the Talbert Marsh, provides open space and visual relief along this stretch of Pacific Coast Highway.

***Public View Opportunities/Corridors***

Public views to the ocean and/or shoreline are afforded from several places along Pacific Coast Highway within the City's Coastal Zone.

**Weaknesses**

***Oil Production Facilities***

Oil pumps, tanks and pipelines are located throughout the Coastal Zone. They are often incongruous with the visual character of the area.

***Utility Facilities***

Coastal Zone visitors who travel Pacific Coast Highway between Newport Beach and Beach Boulevard cannot miss the electrical generating plant or the regionally serving sewage treatment plant located adjacent to the Santa Ana River. Both facilities dominate the landscape and negatively impact the visual and aesthetic character of the surrounding area.

***Billboards***

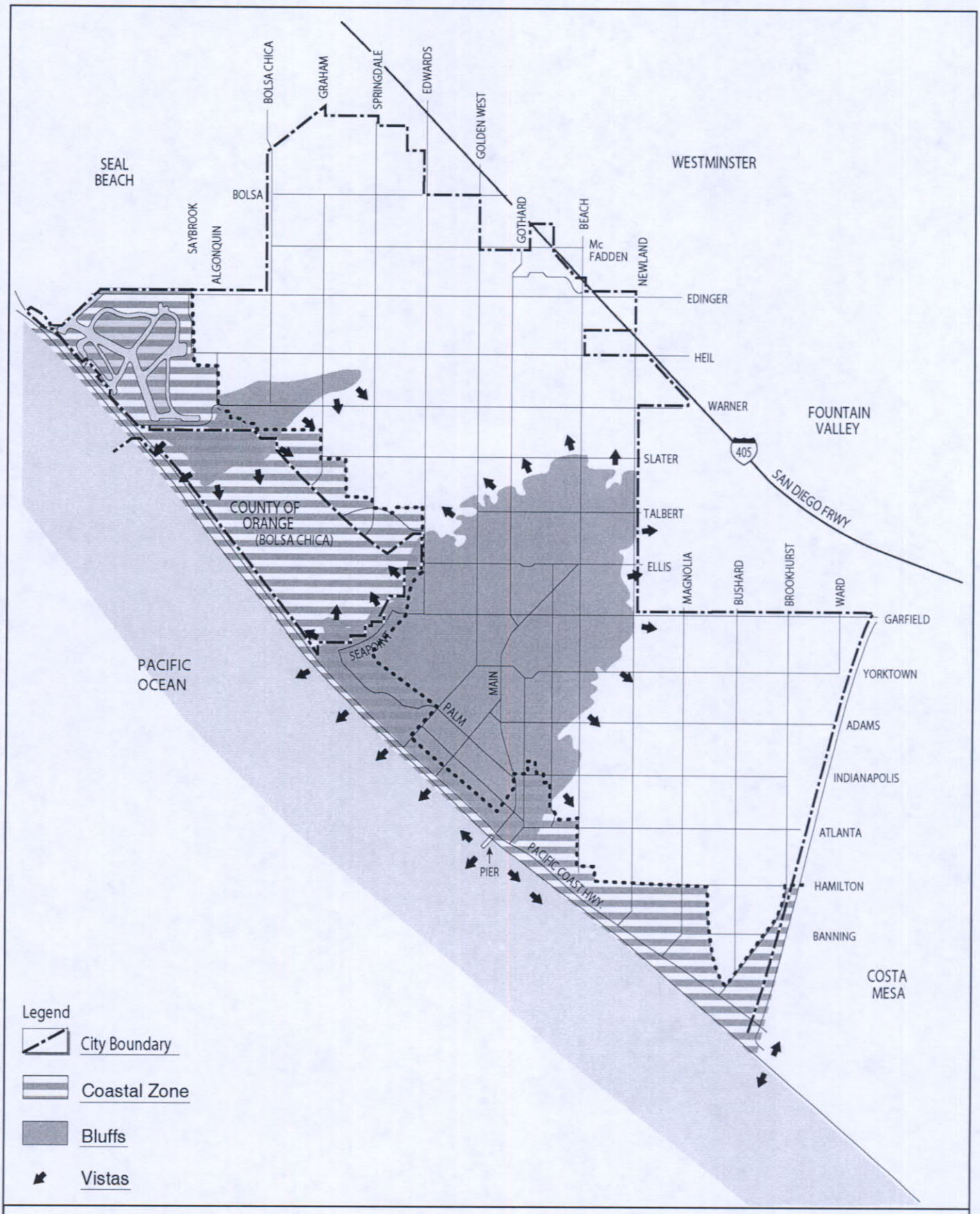
Though fewer in number than ten years ago, billboards remain in the City's Coastal Zone today. The billboards are inconsistent with the visual character of the Coastal Zone, block views and clutter the landscape.

***Electrical Transmission Lines***
Electrical transmission lines, visible along the beach bluffs and in open areas, detract from the scenic potential of the Coastal Zone.

***Pacific Coast Highway***
The visual experience along Pacific Coast Highway could be improved through increased landscaping, curb and gutter treatments, placing transmission lines underground, screening oil production facilities and utilities, and removing billboards.

## Historic and Cultural Resources

Coastal Act Policy requires that significant historical and archeological resources of the Coastal Zone be identified and protected. The Coastal act identifies such resources located within the Coastal Zone, and sets forth policies to ensure reasonable protection and or enhancement of such resources.




# BLUFF AREAS AND SCENIC OPPORTUNITIES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

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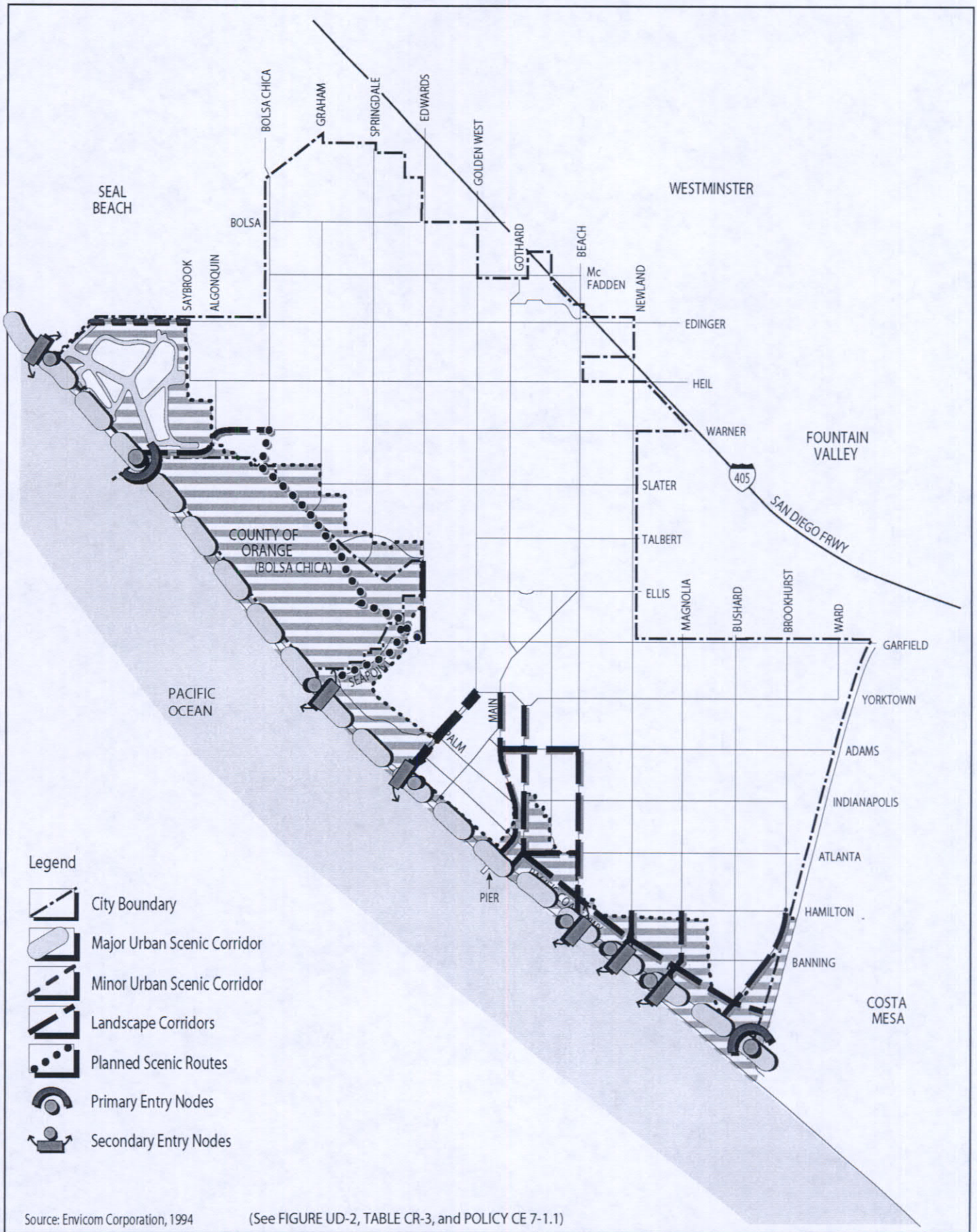
FIGURE C-17



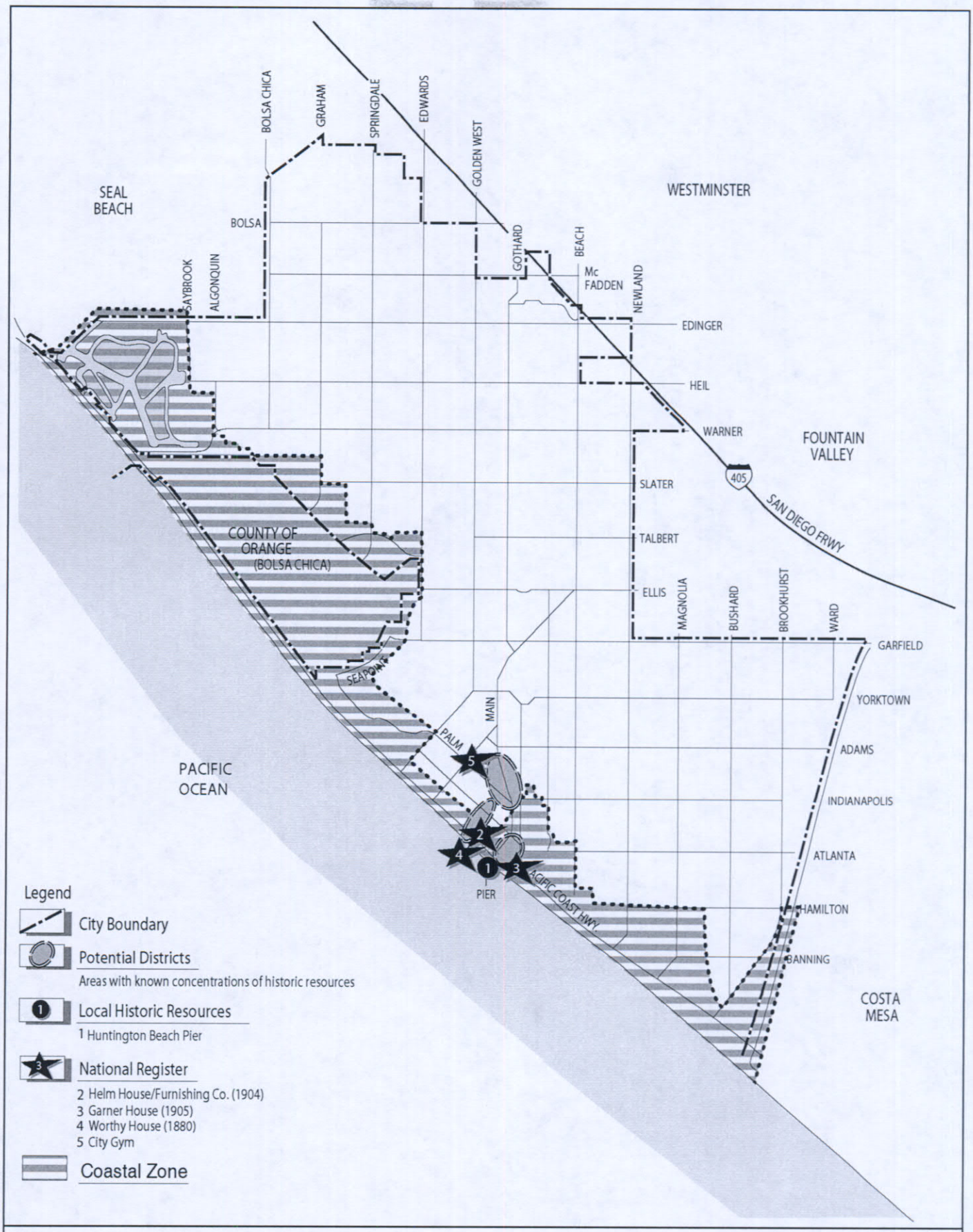

Source: Envicom Corporation, 1994 (See FIGURE UD-2, TABLE CR-3, and POLICY CE 7-1.1)

## SCENIC HIGHWAYS, SCENIC CORRIDORS, AND LANDSCAPE CORRIDORS

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-18




# HISTORICAL & CULTURAL RESOURCES IN THE COASTAL ZONE

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-19

## Water and Marine Resources

One of the primary goals of the Coastal Act is to prevent marine resource degradation caused by urbanization. The Coastal Act requires that the biological productivity and quality of these resources be maintained and, where feasible, restored. Coastal water and marine resources in Huntington Beach include the ocean, the Huntington Harbour waterways, flood control channels, wetlands and freshwater sources such as underground aquifers. Urban runoff, outfalls from industrial uses, diking, dredging, filling, boating activities and saltwater intrusion are all factors that may negatively impact the City's water and marine resources. Coastal Element policy strives to remove or mitigate the negative impacts of these factors. These potentially negative factors are described in greater detail below. See **Figure C-20** for the location of existing shoreline structures, outfalls and industrial facilities in the City's Coastal Zone.

### Urban Runoff

Urban runoff carries millions of pounds of pollutants annually into coastal waters. The runoff comes from City streets and gutters, as well as all inland areas that drain into regional stormwater and drainage facilities and ultimately into the ocean. Efforts to minimize urban runoff from new development include requiring Water Quality Management Plans for all new development within the Coastal Zone and coordinating with responsible regional agencies.

### Ocean Outfalls

There are five outfalls (discharge pipes) located in the ocean off of Huntington Beach: The electrical generating plant outfall, the two Orange County Sanitation District Plant No. 2 outfalls, and two oil facility outfalls.

The electrical generating plant takes in water for cooling purposes and discharges heated water into the sea via intake and discharge pipes that extend from the plant into the ocean under the beach just south of Newland Street. The discharged water is not contaminated, but is heated. The full effect of the warm water discharge is not known. Certain native species may no longer find the area habitable, while warmer water species may be attracted to it. The cool water intake process is known to trap or "entrain" some ocean organisms, many of which die as a result.

The Orange County Sanitation District's Plant No. 2 outfalls are located approximately five miles offshore. The primary outfall pipe is 120 inches in diameter and discharges treated sewage effluent into the ocean off of Huntington Beach at a rate of 180 million gallons per day. The secondary outfall is 78 inches in diameter and is for emergency purposes only. To date, the emergency outfall has not been used. Prior to treatment, raw sewage may contain pathogenic bacteria, viruses, heavy metals and other pollutants detrimental to human health and/or marine life. Ongoing monitoring of effluent discharge is imperative to ensure public health and environmental protection. The Sanitation District employs constant monitoring of the treated effluent discharged into the ocean.

The oil facility outfalls, which extend under Bolsa Chica State Beach into the ocean, discharge treated runoff and oil field production water. All five outfalls are regulated by the Environmental Protection Agency through the Regional Water Quality Control Board and require NPDES permits.

**Oil Production Wastes**

Oil production facilities located on land are a significant source of wastewater entering City sewerage. The City requires that wastewater from oil activities be cleared to 100 mg of oil/liter before being discharged into City sewerage. Liquid wastes that cannot meet this standard must be transported to approved disposal facilities. Runoff from these land facilities can contain oil, solids, sulfur wastes and drilling muds and their additives. On principal oil production parcels, the runoff must be collected in basins or sumps and treated in separation facilities before being disposed into public sewerage or the ocean. On smaller parcels, the water must be contained on site.

**Diking, Dredging, Filling and Shoreline Structures**

Detrimental environmental impacts associated with diking, dredging and filling operations include high mortality of marine organisms trapped in the dredged material, burial and smothering of organisms by fill material, reduction of fish populations due to impacts of increased suspended sediments (turbidity), and overcrowding of organisms in adjacent waters. In addition, dredging tends to re-suspend harmful pollutants that may have settled into bottom sediments.

**Boating Activities**

Of the City's coastal waters, Huntington Harbour is most impacted by contaminants from boating activities. Common boating activity contaminants include small amounts of copper from paints, fuel leakages and boathead wastes (from toilets and kitchens). Boathead discharges are prohibited in harbor areas. Low dissolved oxygen due to lack of circulation or aeration is another potential water quality nuisance in Huntington Harbour. Artificial aeration systems currently exist in the Long Channel to increase dissolved oxygen levels. Additional systems in other side channels in the harbor can be pursued if found necessary.

**Saltwater Intrusion**

Saltwater intrusion into the fresh water underground aquifers is of great concern in Orange County and Huntington Beach. Over pumping of groundwater reserves can result in saltwater flowing inland toward the freshwater wells. Ongoing monitoring, maintenance of groundwater reserves through water conservation and the construction of artificial salinity barriers are strategies that have been and continue to be implemented to minimize saltwater intrusion.

**Interagency Coordination**

Coastal water quality issues extend beyond local jurisdictional boundaries to the regional, state and federal levels. A listing of the outside agencies involved in or responsible for water quality issues in Huntington Beach is provided below. The City's Coastal Element policy recognizes the jurisdictional hierarchy and promotes local strategies that can be used to supplement regional, state and national efforts.

***The United States Environmental Protection Agency***
Implements federal water pollution law. Relies largely on National Pollutant Discharge Elimination System (NPDES) permit process to implement regulations.

***The United States Army Corps of Engineers***
Regulates diking, dredging and fill activities in coastal waters.

***The California State Department of Fish and Game***
Regulates diking, dredging and fill activities in coastal waters.

***The California State Lands Commission***
The CSLC manages the State's property interest in filled and unfilled tidelands, submerged lands and beds of navigable waterways. The Commission regulates diking, dredging and fill activities in coastal waters.

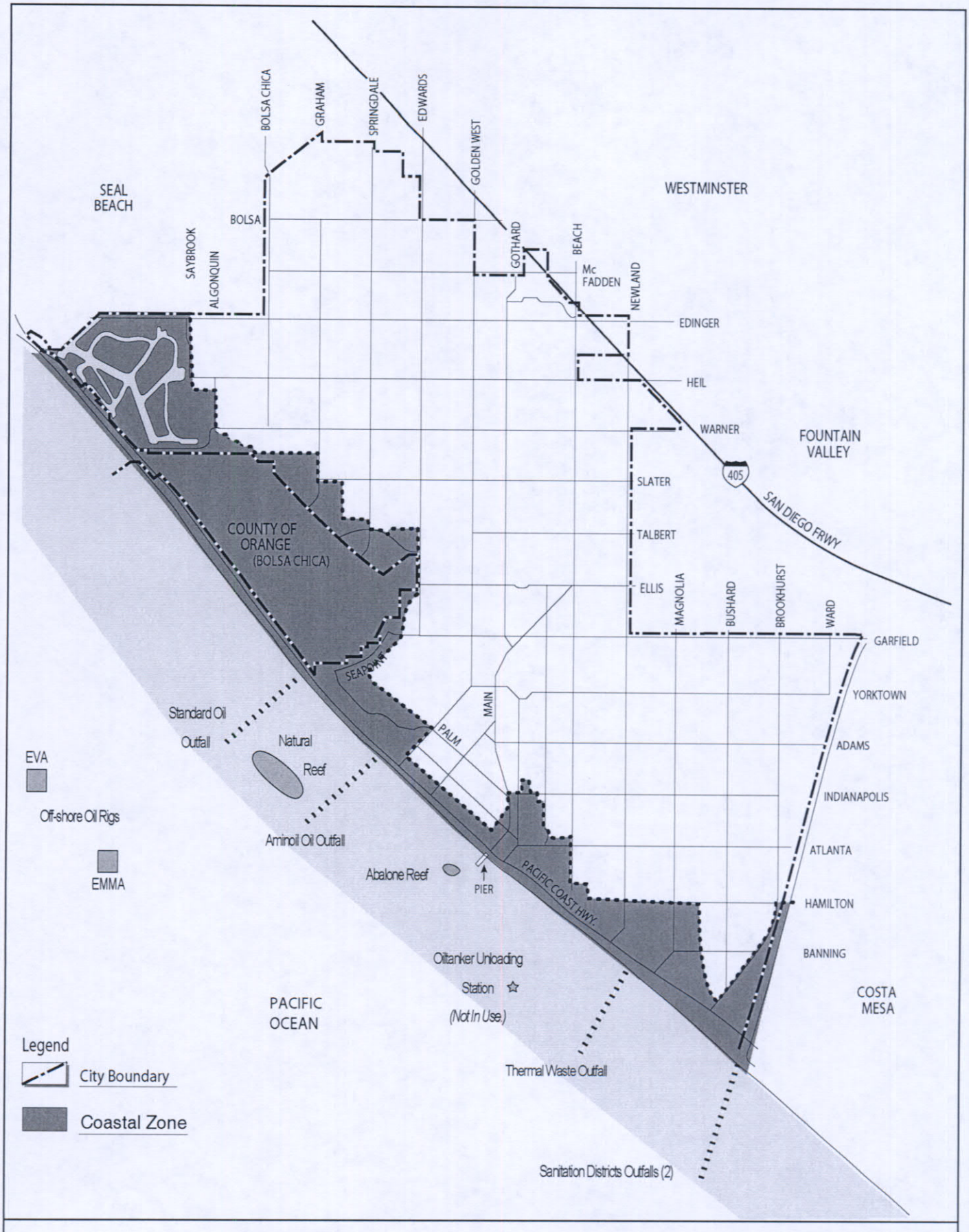
***The Santa Ana Regional Water Quality Control Board (RWQCB)***
Administers regional NPDES permits. Has jurisdiction over effluent and recycled water.

***Orange County Public Facilities and Resources Department (OCPFRD)***
Monitors the temperature, acidity, dissolved oxygen content, heavy metals content and other physical parameters of waters in Huntington Harbour, Anaheim, Sunset and Bolsa Bays and inland flood control channels. Reports all testing to RWQCB.

***Orange County Department of Health***
Monitors bacterial levels in Huntington Harbour and in the ocean water off of the County's beaches. Also responsible for testing mussels taken from the Municipal Pier and clams from the Talbert Flood Control Channel for various contaminants. Reports all testing results to the RWQCB.

***The Orange County Sanitation District***
Maintains a testing operation to monitor effluent as it leaves the sanitation plant and at its outfall. Also tests ocean water at various strategic points near outfall. Reports all testing results to the RWQCB.

***Orange County Water District***
Responsible for regulation and monitoring of saltwater intrusion in underground water sources.




# SHORELINE STRUCTURES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-20

## Environmentally Sensitive Habitats

The Coastal Act requires the protection of environmentally sensitive habitat areas against any significant disruption of habitat values. An environmentally sensitive habitat area is defined as any area in which plant or animal life is either rare or especially valuable and could be easily disturbed or degraded by human activities and developments. The City's Coastal Element identifies three "environmentally sensitive habitat areas" within the City: 1) the Huntington Beach wetland areas, 2) the California least tern nesting sanctuary, and 3) the wetlands and Eucalyptus ESHA on the Parkside site. (See **Figure C-21 for location of No. 1 and 2.**) The Coastal Element includes policies to protect and enhance environmentally sensitive habitat areas in accordance with the Coastal Act.

### Huntington Beach Wetland Areas

The Coastal Act defines wetlands as "land within the Coastal Zone which may be covered periodically or permanently with shallow water." Salt water marshes, freshwater marshes, open or closed brackishwater marshes, swamps, mudflats and fens are included. Throughout the nation, wetland areas are declining as a result of urbanization. Wetland areas are significant primarily due to their function as habitat for animal and plant species, some of which are rare or endangered. They are protected through federal and state regulations, including the Coastal Act.

The Huntington Beach Coastal Zone includes approximately 124.5 acres of land considered to be functional or restorable wetlands. These wetland areas are actually remnants of what was once an extensive coastal marsh system along the Southern California coastline and have been the subject of much study and debate over the years. In 1986, after coordination and negotiations with the landowners, and responsible regional, state and federal agencies, the California Coastal Commission approved what is depicted in this Coastal Element as wetland areas. Today, approximately 92 acres of the wetland area near the Talbert Channel in Huntington Beach are undergoing restoration. The remaining wetland areas west of the electrical generating plant and east of Beach Boulevard are also proposed for restoration.

The Huntington Beach Wetlands, as identified by the California Department of Fish of Game, are depicted on **Figure C-21.** The wetlands support plant life that in turn provides habitat to amphibians, birds and mammals, most notably the California least tern and Belding's savannah sparrow which feed and nest in the area. Examples of other plant and animal life that may be supported by the Huntington Beach Wetlands are listed below.

In addition to the wetland areas shown in **Figure C-21,** a 0.8 acre degraded wetland area has been identified on the undeveloped portion of the Waterfront Development site, near Beach Boulevard. Pursuant to a settlement agreement between the California Coastal Commission, the City of Huntington Beach and the property owner, a conservation easement has been recorded on this property and this wetland area shall be preserved.

#### *Plant Life*

Plants of the coastal marsh community grow along the upper reach of the coastal estuarine community where they receive only periodic inundation by sea water. Freshwater streams often flow through this community and dilute the salinity of the seawater. The salt marsh community embodies several distinct components; pickleweed marsh, salt flat, saltwater channel, saltwater pond, and a disturbed component. The dominant plant is common pickleweed. Other common

plants include five-hooked bassia, slender aster, spear saltbush, saltgrass, and to a lesser extent, alkali heath.

Most of the wetland system in Huntington Beach has been cut off from tidal flow for some time and several characteristic salt marsh plants dependent upon daily tidal flushing may have disappeared. Formerly characteristic plants that are now scarce or absent from salt marsh are cordgrass, sea-lavender, shoregrass, annual pickleweed, samphire, and saltwort. Unsuitable soil, hydrologic or physiographic conditions may preclude the presence of some species. Other species are difficult to distinguish from similar common species (annual pickleweed) and may be overlooked. Others are dependent upon periodic inundation with freshwater for germination and may have been adversely affected by the channelization of local freshwater drainages such as the Santa Ana River and the Talbert Valley drainage network.

***Wildlife***

Salt marsh communities are among the most productive of ecosystems supporting a large wildlife population.

*Amphibians*

Although most amphibians are not adapted to a marine or estuarine existence, a few species may enter brackish portions of the salt marsh from nearby freshwater habitats. The Pacific treefrog and California (western) toad may be present in the freshwater marsh west of Beach Boulevard, as well as the introduced bullfrog. The garden (Pacific) slender salamander is a widespread inhabitant of moist soils and can thrive even around well-watered lawns and gardens. Historically, this species lived in riparian woodland along the Santa Ana River, and has since spread into landscaped areas.

Several species of lizards and snakes are expected to occur in the coastal wetlands, above areas of tidal flux. Species likely to occur include Great Basin (western) fence lizard, side-blotched lizard, southern alligator lizard, California (common) kingsnake, San Diego gopher snake, and southern pacific (western) rattlesnake.

*Birds*

Birds are abundant inhabitants of the coastal wetlands. Salt marshes, salt flats, and estuaries nest more species and larger concentrations of birds per unit area than perhaps any other ecosystem in temperate North America. Migrant and wintering waterfowl, waders, shorebirds, gulls and terns constitute the bulk of avian species that utilize estuarian habitats for foraging and resting. Most nesting birds in coastal salt marshes are the smaller, less conspicuous landbirds. One such species, the Belding's savannah sparrow, is a common inhabitant of pickleweed salt marshes. This subspecies of savannah sparrow, however, has been reduced in numbers, due to habitat loss, and is now considered an endangered species by the California Department of Fish and Game. Other birds that nest in the salt marsh are the song sparrow and western meadowlark in the upper portions, marsh wren in the reeds and sedges, and killdeer on the salt flats. In the small freshwater marshes, breeding birds likely include the red-winged blackbird, song sparrow and marsh wren.

The federal and state endangered California least tern has been observed feeding on mosquitofish in the pond below the electrical generating plant and on small marine fish in the Bolsa Chica area. This usually occurs when its chicks are young and small fish may not be readily available

elsewhere. Presumably, with a tidal connection and a more diverse fish fauna, least terns would utilize the salt marsh channels and ponds to a greater degree than they do presently.

The freshwater wetlands do not support the diverse bird population that its saltwater counter part does. Occasionally long-legged waders such as the black-crowned night-heron or dabbling ducks may be found feeding. Birds more typical of other habitats may use these areas as a water source for drinking and bathing. Terrestrial species expected around the freshwater wetlands include black-chinned hummingbird, ash-throated flycatcher, house wren, common yellowthroat, orange-crowned warbler, California towhee, brown-headed cowbird, and the common house finch.

*Mammals*

The most conspicuous mammal in the salt marsh is the Audubon's cottontail. Other mammals presumed to be plentiful here are the black-tailed hare, California (Beechey) ground squirrel, Botta's pocket gopher, deer mouse and several nocturnal rodents, such as the western harvest mouse, house mouse, and Norway rat. Predators such as the Virginia opossum, coyote, long-tailed weasel, red fox, and striped skunk are also likely to be present.

**California Least Tern Nesting Sanctuary**

The California least tern is listed on the federal and state endangered species lists. It is a native to Southern California coastal salt marshes and nests on sandy beaches close to wetlands and estuaries where they feed on small fish. Encroaching development has resulted in loss of feeding grounds, and heavy recreational use of sandy beaches has disrupted natural nesting areas. These factors have threatened the existence of the least tern. To help protect the California least tern from extinction, a permanent, fenced five-acre nesting area was established in 1969 on the Huntington Beach State Beach near the Santa Ana River mouth. The nesting sanctuary is maintained by the State Department of Parks and Recreation and is considered to be one of the most successful nesting colonies in the State.

**Parkside Eucalyptus ESHA and Wetlands (See Figure C6a)**

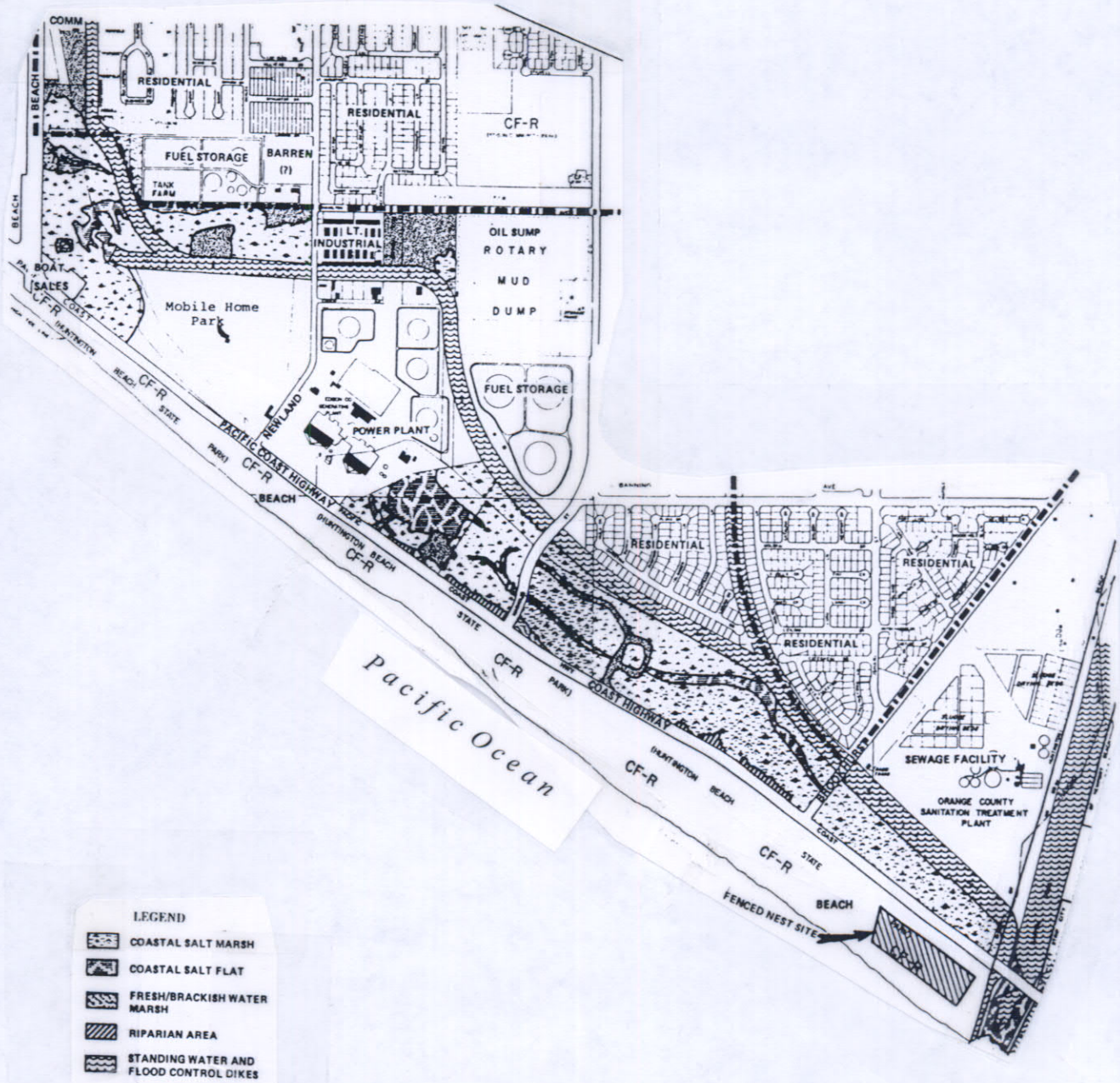
Historically, this site was part of the extensive Bolsa Chica Wetlands system and was part of the Santa Ana River/Bolsa Chica complex. In the late 1890s the Bolsa Chica Gun Club completed a dam with tide gates, which eliminated tidal influence, separating fresh water from salt water. In the 1930s, agricultural ditches began to limit fresh water on the site, and in 1959, the East Garden Grove-Wintersburg Flood Control Channel isolated the site hydrologically. Nevertheless, wetland areas remain present at the site. There are existing and previously delineated wetlands, and areas that have been filled without authorization and are capable of being restored. These areas as well as their buffer areas are designated Open Space-Conservation, and uses allowed within these areas are limited.

In addition, on the site's southwestern boundary, at the base of the bluff, is a line of Eucalyptus trees that continues offsite to the west. These trees are used by raptors for nesting, roosting, and as a base from which to forage. The trees within this "eucalyptus grove" within or adjacent to the subject site's western boundary constitute an environmentally sensitive habitat area (ESHA) due to the important ecosystem functions they provide to a suite of raptor species. The Eucalyptus trees along the southern edge of the Bolsa Chica mesa are used for perching, roosting, or nesting by at least 12 of the 17 species or raptors that are known to occur at Bolsa Chica. Although it is known as the "eucalyptus grove," it also includes several palm trees and pine trees that are also

used by raptors and herons. None of the trees are part of a native plant community. Nevertheless, this eucalyptus grove has been recognized as ESHA by multiple agencies since the late 1970s (USFWS, 1979; CDFG, 1982, 1985) not because it is part of a native ecosystem, or because the trees in and of themselves warrant protection, but because of the important ecosystem functions it provides. Some of the raptors known to use the grove include the white tailed kite, sharp-shinned hawk, Cooper's hawk, and osprey. Many of these species are dependent on both the Bolsa Chica wetlands and the nearby upland areas for their food. These Eucalyptus trees were recognized as ESHA by the Coastal Commission prior to its 2006 certification of this section of this LCP, most recently in the context of the Coastal Commission's approval of the adjacent Brightwater development (coastal development permit 5-05-020).

The Eucalyptus grove in the northwest corner of the site, although separated from the rest of the trees by a gap of about 650 feet, provides the same types of ecological functions as do the rest of the trees bordering the mesa. At least ten species of raptors have been observed in this grove, and Cooper's hawks, a California Species of Special Concern, nested there in 2005 and 2006. Due to the important ecosystem functions of providing perching, roosting and nesting opportunities for a variety of raptors, these trees also constitute ESHA. These areas as well as their buffer areas are designated Open Space-Conservation, and uses allowed within these areas are limited.

The wetlands, Eucalyptus ESHA areas, and buffer areas are designated Open Space-Conservation to assure they are adequately protected.




ENVIRONMENTALLY SENSITIVE HABITATS AS DEPICTED BY THE DEPARTMENT OF FISH AND GAME

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

NORTH

FIGURE C-21

## Energy Facilities

The Coastal Act provides for the locating of coastal dependent facilities within the Coastal Zone, subject to certain criteria and limitations. Huntington Beach's coastal area is a center for important energy-related and industrial activities that are coastal dependent, including oil wells, extraction, separation and transport facilities and a regionally serving electrical generating plant. Recognizing the greater than local significance of the City's energy resources, Coastal Element policy allows for the continuation, and in some cases expansion, of these facilities while ensuring the community's public health and safety, environmental protection and minimization of negative aesthetic impacts to the maximum extent feasible. Existing energy facilities in the City's Coastal Zone are listed below and depicted in **Figure C-22.**

### Oil Related Facilities

A portion of the City's Coastal Zone is situated above the seventh largest oil field in California, including the Talbert, Sunset Beach, West Newport and Huntington Beach oil fields. Wells from offshore platforms and onshore sites tap these underground pools. The Coastal Zone also accommodates facilities to treat, store and transport the oil and gas extracted through these wells. These oil fields and several others associated with the Newport-Inglewood Fault Zone have produced more than five billion barrels of oil to date. (General Plan Technical Background Report – 1996.) Records indicate that oil fields in Huntington Beach produce over 4 million barrels of oil annually. The trend has been an annual decrease in oil production from area facilities. Oil activities are being replaced with other land uses as the value of land increases. This trend is expected to continue and existing oil operations are anticipated to decrease over the plan horizon of this Coastal Element.

#### *Oil Wells/Extraction Facilities*

There are approximately 257 oil wells in the City's Coastal Zone (City of Huntington Beach, Oil Production Tax Rolls as of 2/99). The largest grouping of these wells (a total of 126) is located on the north side of Pacific Coast Highway between Goldenwest Street and the City corporate boundary (Figure C-10, Sub-area 4B). The site is owned by Aera Energy, LLC. The property owner has informed the City that it intends to continue oil activities on the site for another 15 to 20 years. In the downtown area, there are several individual wells, or small groupings. Increased land values and diminishing returns for small scale oil operations have led to a significant reduction in oil wells in the Coastal Zone. Although Coastal Element policy provides for existing oil operations to remain, it is anticipated that such facilities will continue to phase out to make way for planned land uses.

#### *Separation and Treatment Facilities*

Wells typically extract a mixture of water, oil and gas. These fluids must be separated from each other before processing or, in the case of wastewater, disposed. A large scale separation plant exists within the Palm/Goldenwest oil field, smaller scale facilities are located within the downtown area, at Atlanta Avenue and Lake Street, and near the sewage treatment plant at Brookhurst Street.

#### *Pipelines*

Underground pipelines transport crude oil, refined products, natural gas, and natural gasoline in the Coastal Zone. Crude oil is shipped from the fields to refineries outside the City. The principal route is Goldenwest Street. Smaller pipes gather fluids from the wells to treatment facilities.

Most of these are located north of Lake Street. Refined products are transported in a pipeline along Newland Street that connects to the electrical power plant.

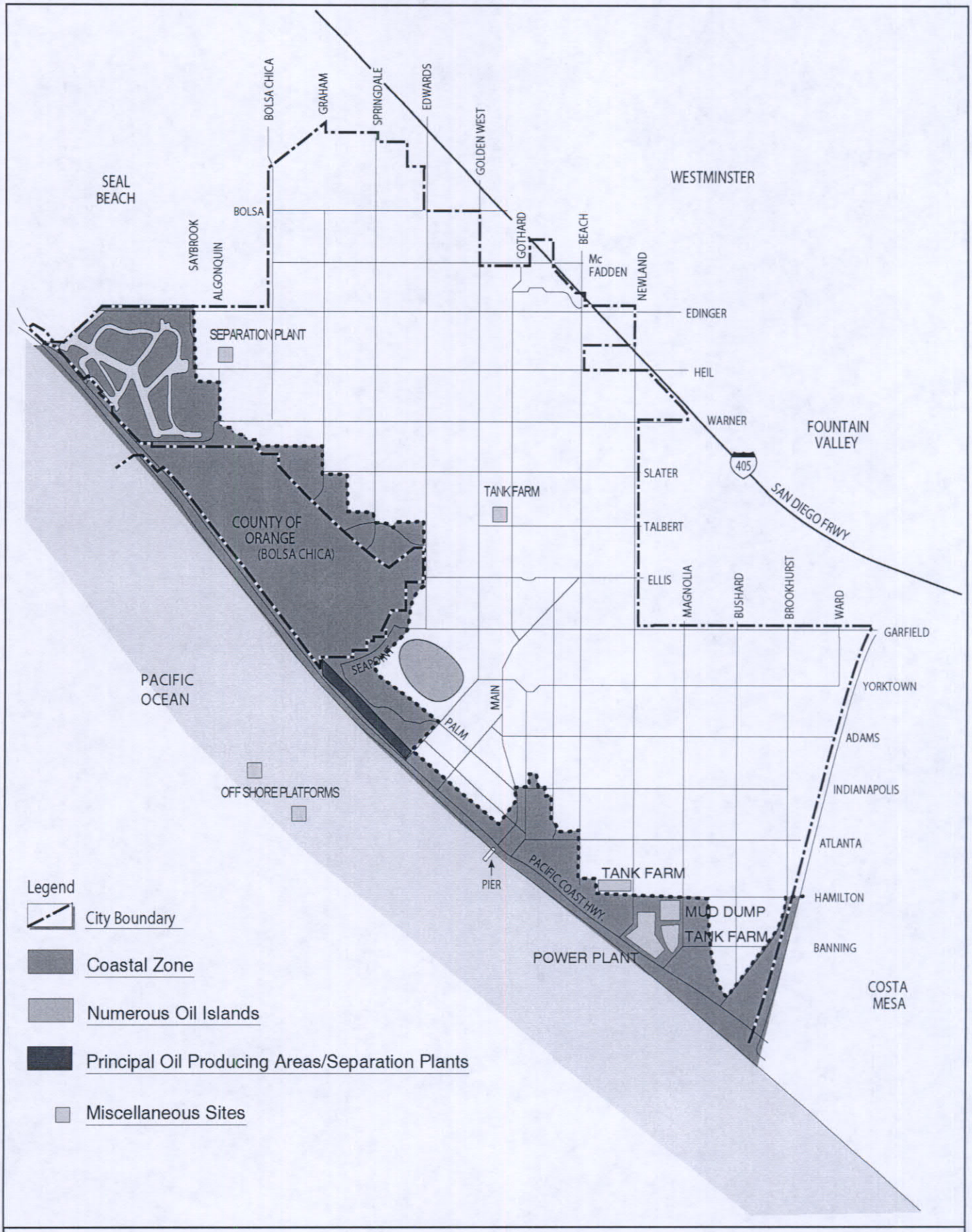
***Offshore Platforms***
Two oil platforms are currently located within three miles off of the City's shoreline. One transports crude oil to facilities located at the Palm/Goldenwest site, and the other transports crude oil via a pipeline to a location outside the Coastal Zone on Heil Avenue. Two platforms are located approximately nine miles offshore along the intercontinental shelf. These facilities pipe crude oil to facilities in Long Beach. Additional oil platforms off of the City's shoreline are not anticipated or desired due to the risk of oil spills and related negative impacts.

***Marine Terminal***
A marine terminal is located approximately 1.3 miles off of the Huntington Beach shoreline. The terminal is presently not in use. Previously, the terminal was used for unloading crude oil from tankers into a pipeline. The oil was then piped onshore near Beach Boulevard. Re-activation of the marine terminal would require approval from the City and outside agencies. Re-activation of the existing marine terminal is not desired, nor are new marine terminals along the City's shoreline. Coastal Element policy reflects this.

***NESI (Ascon) Site***
From 1950 to 1970, the rotary mud dump at Hamilton Avenue and Magnolia Street (currently known as the NESI site) was used as a disposal site for drilling muds, which are wastes from oil well drilling operations. The drilling muds contained hazardous materials. Presently, the site is inactive and is included on the State Superfund list of hazardous waste sites. Coastal Element policy promotes remediation of the site and prohibits re-use of the property unless and until this has been accomplished.

***Electrical Power Plant***
This facility is located at Newland Street and Pacific Coast highway. Four fossil-fuel powered steam turbines generate the plant's base load electricity. A single natural gas turbine is used as a peaking unit at times of high demand. Four substations which reduce the voltage from the plant to more manageable levels are also located in the Coastal Zone. Seven large tanks adjacent to the plant are available to store the fuel oil used to fire the boilers in which the steam is produced. It is anticipated that the power plant will continue to operate for the next twenty years. Coastal policy and adjacent vacant land provide opportunity for potential expansion, if needed.

***Transmission Lines***
Energy transportation systems are important uses in the Coastal Zone. High voltage transmission lines run from the power plant to Hamilton Avenue and then outside the Coastal Zone. High voltage transmission lines cannot be placed underground.




ENERGY FACILITIES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

NORTH

FIGURE C-22

## Water, Sewer and Drainage Facilities

Coastal Act policy calls for public works facilities to be designed and, in some cases, limited to accommodate needs generated by development or uses permitted in accordance with the Coastal Act. Public works facilities include sewer, water, drainage and circulation systems. Issues pertaining to water, sewer and drainage facilities in the Coastal Zone are discussed below. Circulation infrastructure is discussed previously under the heading of Shoreline and Coastal Resource Access.

In general, the City's infrastructure systems are designed on a city-wide, or regional service need basis, and are not limited to the boundaries of the Coastal Zone. Prior to adopting the General Plan Land Use Map in 1996, which includes the Coastal Zone Land Use Map, several technical studies were undertaken to determine what levels of infrastructure would be needed to support the land use plan when fully developed. The studies concluded that improvements to existing systems will be required in order to meet projected needs. The Utilities Element of the General Plan addresses water, sewer and drainage needs for the entire City. The Growth Management Element of the General Plan addresses phasing and funding needs. Coastal Element policy is consistent with the Utilities and Growth Management elements in its objective to ensure adequate infrastructure for existing and planned land uses within the Coastal Zone.

*Water Supply, Transmission and Distribution*

The Huntington Beach Public Works Department is responsible for supplying water to City residents and non-residential users. Approximately seventy-five percent of the City's water is supplied by groundwater wells, the remainder is imported through the Metropolitan Water District (MWD) from the Colorado River and State Water Projects. Pricing structures for MWD water are established by the MWD to encourage use during periods of surplus and discourage use during periods of deficiencies. Likewise, the Orange County Water District (OCWD) manages groundwater pumping for the underground basin and through basin assessments regulates members' production from the groundwater basin. The groundwater basin managed by the OCWD will continue to increase groundwater replenishment to accommodate increased groundwater production. There are currently 13 potable water groundwater wells located in the City. Five of the wells are inactive due to poor water quality or are incomplete and lack pumping equipment. The City also has three wells used for irrigation purposes only. None of the wells are located in the Coastal Zone due to potential saltwater intrusion issues. Seawater intrusion is managed by the OCWD through the use of barrier injection wells. Studies have concluded that the City's water supply is adequate to serve the anticipated future population and land use. Growth in the City will be accommodated by increased MWD purchases and groundwater production. Coastal Element policy promotes water conservation measures and strategies to prevent groundwater contamination from saltwater intrusion.

With current technology, desalinization has not proven to be a cost-effective method for producing potable water as an alternative to pumping it out of the underground basin or purchasing it from the MWD. However, as technological advances occur, the use of desalinized water may become cost effective in the future and should continue to be considered as an alternative water source for possible future use. As such, Coastal Element policy supports investigating the feasibility of using desalinized ocean water for potable water in the region. Coastal Element policy does not identify a site within Huntington Beach to accommodate a desalinization plant, nor does it assume that such a plant would be located within the city. Regional, interagency coordination and feasibility studies are encouraged.

While supply does not appear to be an issue, studies reveal an inadequacy in the amount of emergency and reserve storage and booster pumping capacity for present day and future demands. The City's water storage system consists of the Overmyer Reservoirs Nos. 1, 2 and 3 and the Peck Reservoir. All are located within the City, but outside of the Coastal Zone. The Peck Reservoir capacity is 16 million gallons and the Overmyer Reservoirs' combined capacity is 24 million gallons. The reservoirs serve as regulating reservoirs for peak demands and provide storage for planned outages and emergencies. The reservoirs generally fill with water during nighttime low demand periods with imported MWD water or groundwater and drain during the daytime high demand periods. Booster pumping facilities pump water from the reservoir storage into the water distribution system to maintain adequate supply during peak periods to supplement groundwater and MWD water supplies.

Improvements to increase the City's water storage capacity will be achieved with the addition of new reservoirs and increased capacity at existing reservoirs. A new Ellis-Edwards Reservoir with a nine million gallon capacity, and a nine million-gallon expansion next to the Peck Reservoir are currently under construction, and an expansion of the Talbert Valley Reservoir site is under consideration. Other new reservoir sites are under investigation, including potential sites within the Coastal Zone. Booster pumping capacity will also be expanded as appropriate, with the new expanded storage. In addition, data acquisition and control systems for water storage will be modernized to allow for enhanced monitoring and control capabilities under both normal operations and emergencies. The City's water distribution system consists of over 480 miles of water lines ranging in size from 2 to 42 inches in diameter. Improvements in the piping system are implemented as older deteriorated or undersized pipes are replaced. This will eliminate flow restrictions and help to accommodate future demands. Coastal Element policy mirrors General Plan policy by calling for an adopted Water Master Plan to be implemented to address identified water storage, booster and distribution system deficiencies.

*Sanitation Treatment and Sewerage*

Sanitation Treatment and Sewerage services are provided by the Orange County Sanitation District (OCSD) and the City of Huntington Beach Public Works Department, Engineering Division. Two OCSD treatment plants serve Huntington Beach. Plant No. 1 treats wastewater generated by other cities and the northern portion of Huntington Beach. Plant No. 2 treats the remainder of the City's sewage. The OCSD has developed improvement plans for the plants to serve the needs of the City through the year 2050. This includes buildout of the City's Coastal Land Use Map.

The existing sewage collection system consists of major trunk lines, smaller feeder lines, and lift stations. The City's Public Works Department is responsible for the local level of service while the OCSD is responsible for the regional service. Deficiencies in the City's pipeline and pump station system have been identified through recent studies. The Coastal Zone, specifically the older Downtown area, includes sewage facilities that are dated and in need of maintenance, repair and/or upgrade. In addition, there are numerous sewer lift stations in the City that are in need of repair and/or replacement. Many of these facilities are in the Coastal Zone. The City has identified the deficiencies and has plans in place to correct them. Coastal Element policy mirrors General Plan policy by calling for master plans and capital improvement programs to ensure adequate sewage facilities to meet the demands of permitted development.

*Storm Drainage*

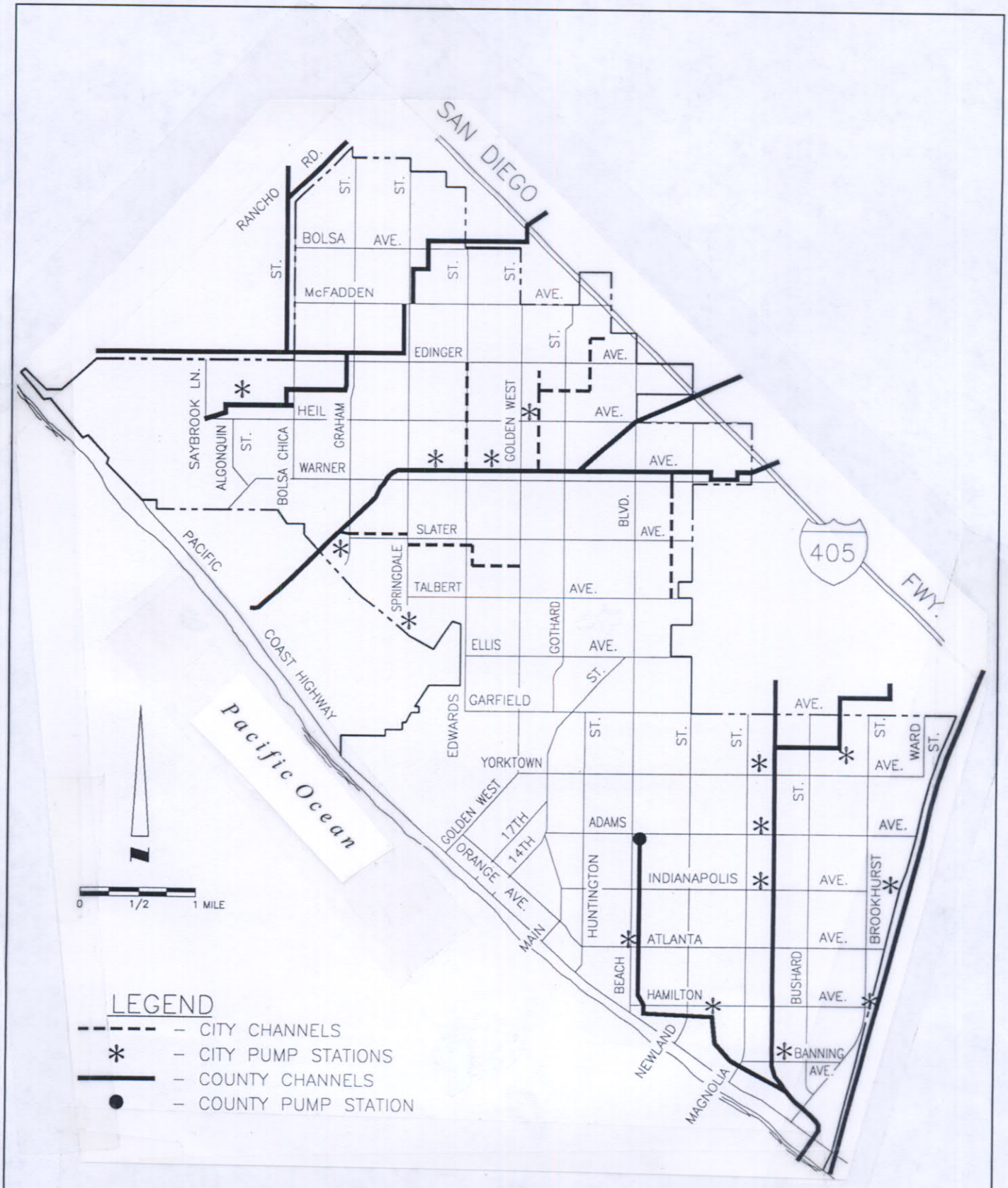
The purpose of the storm drainage system is to protect residents and development from flooding by removing water runoff from streets and transporting it to the ocean. The storm drainage system in Huntington Beach is operated by the Orange County Flood Control District (OCFCD) and the City of Huntington Beach Public Works Department. The system includes drainage channels and pumping stations. The City's original drainage system was designed to accommodate 25 year flood events or less; the standard at the time. Recent improvements have been made to the Santa Ana River channel to accommodate up to a 100 year storm event; today's design standard. It is the goal of the OCFCD and City to improve the drainage system in Huntington Beach to today's standards where feasible and appropriate. The OCFCD is responsible for regional flood control facilities that traverse the City. The City is responsible for its own sub-regional and local drainage facilities. The majority of the City's drainage facilities is eligible for improvements by the OCFCD and are slated for improvement as funding permits. Some of these facilities are located in the Coastal Zone. Coastal Element policy calls for adequate storm drainage facilities for the Coastal Zone and requires that a master plan and capital improvement program be developed and implemented.


# CITY AND COUNTY SEWERAGE FACILITIES

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

NORTH

FIGURE C-23




## DRAINAGE CHANNELS AND PUMPING STATIONS

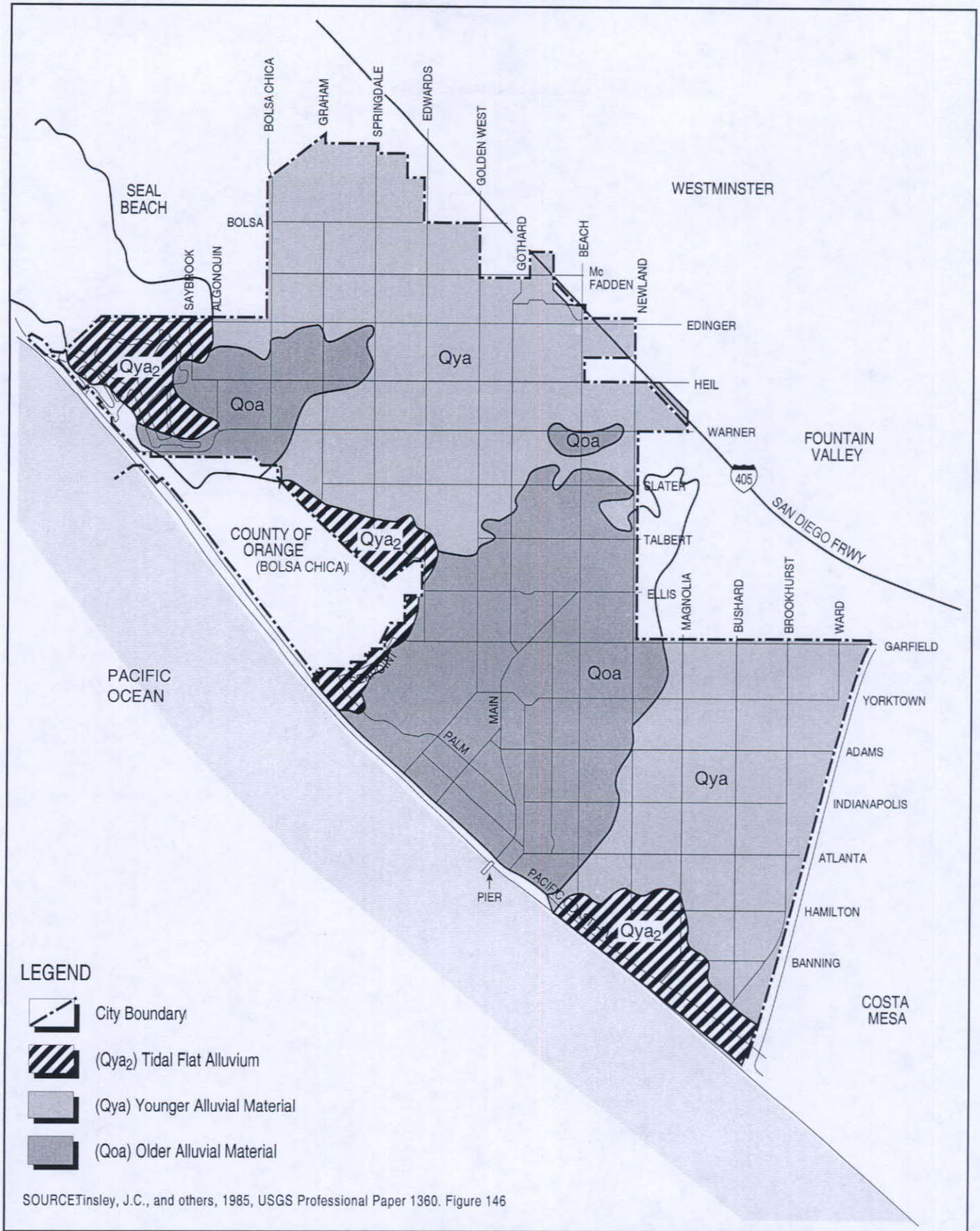
CITY OF HUNTINGTON BEACH COASTAL ELEMENT

NORTH

FIGURE C-24

## Hazards

Coastal Act policy requires that risks to life and property from flood, fire and geologic factors be minimized to the extent feasible. Natural environmental hazards in the City's Coastal Zone result from the area's geologic history and proximity to the ocean. The Coastal Zone has three geologically active earthquake faults that are part of a larger Newport-Inglewood fault structure, as well as several potentially active faults. The City's Coastal Zone also contains peat and organic soil deposits that contribute to methane gas generation and release and have high subsidence potential. Clay soils, which have a high expansion potential, are also prevalent. Further, some areas between the Santa Ana River and Beach Boulevard and between the northwest bluffs and Warner Avenue are at a lower elevation than the river and the connecting flood control channels and are subject to potential flooding during a 100 year storm. Figures C-25 through C-35 depict hazards within the City of Huntington Beach. Coastal Element policy requires that new development provide mitigation to minimize hazard risks.



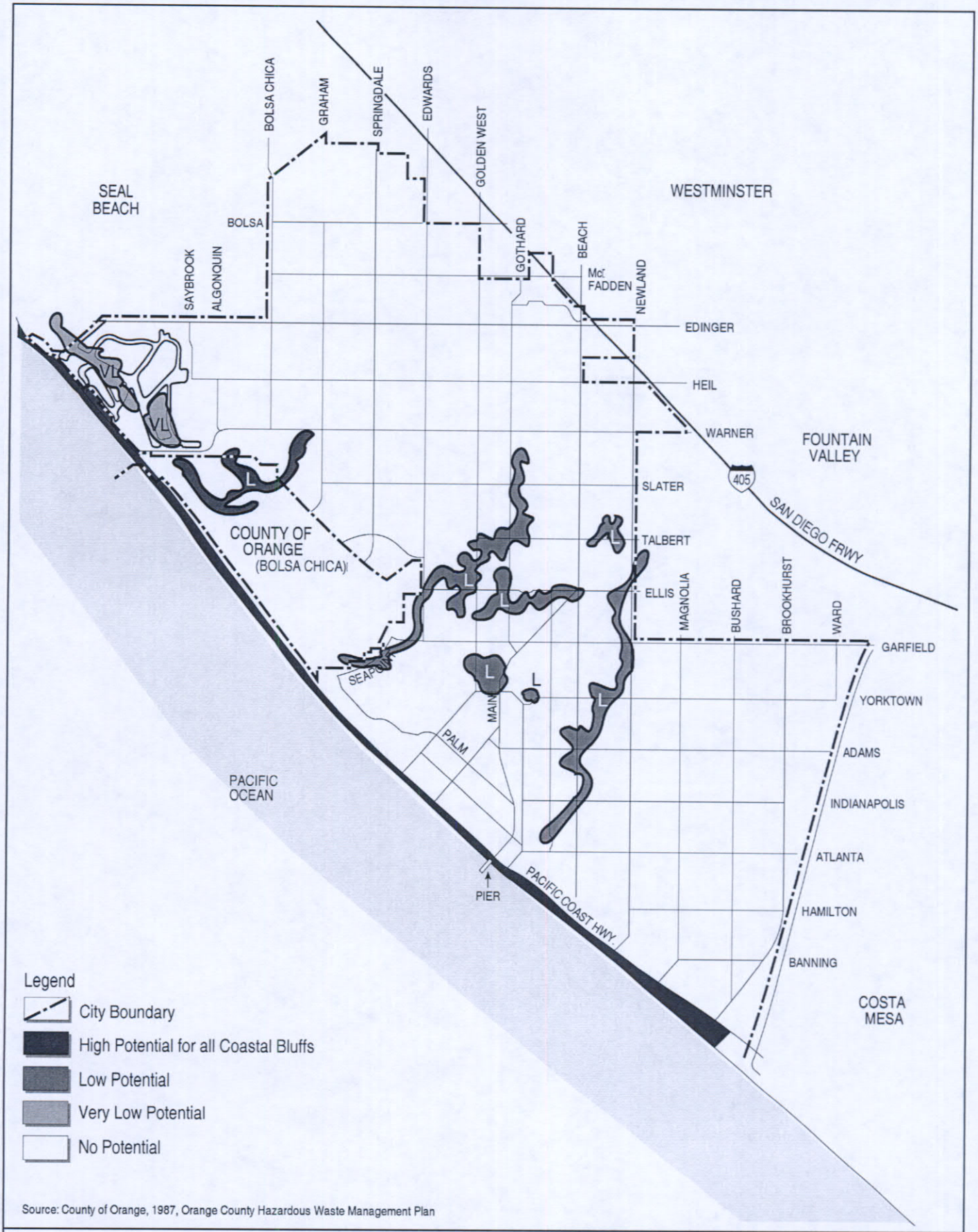

SOURCE: Tinsley, J.C., and others, 1985, USGS Professional Paper 1360. Figure 146

## SURFACE GEOLOGY

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-25



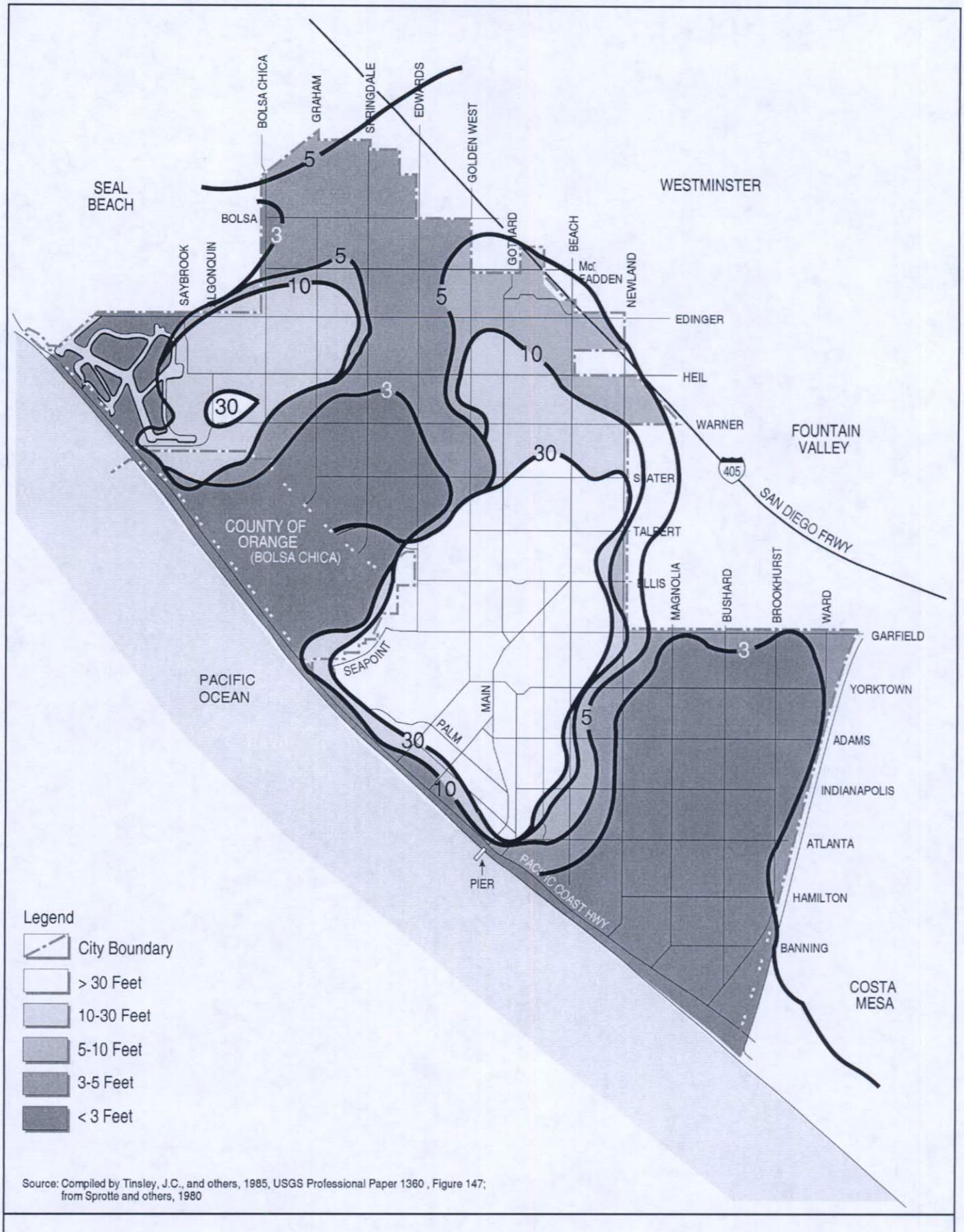

Source: County of Orange, 1987, Orange County Hazardous Waste Management Plan

## POTENTIALLY UNSTABLE SLOPE AREAS

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-26



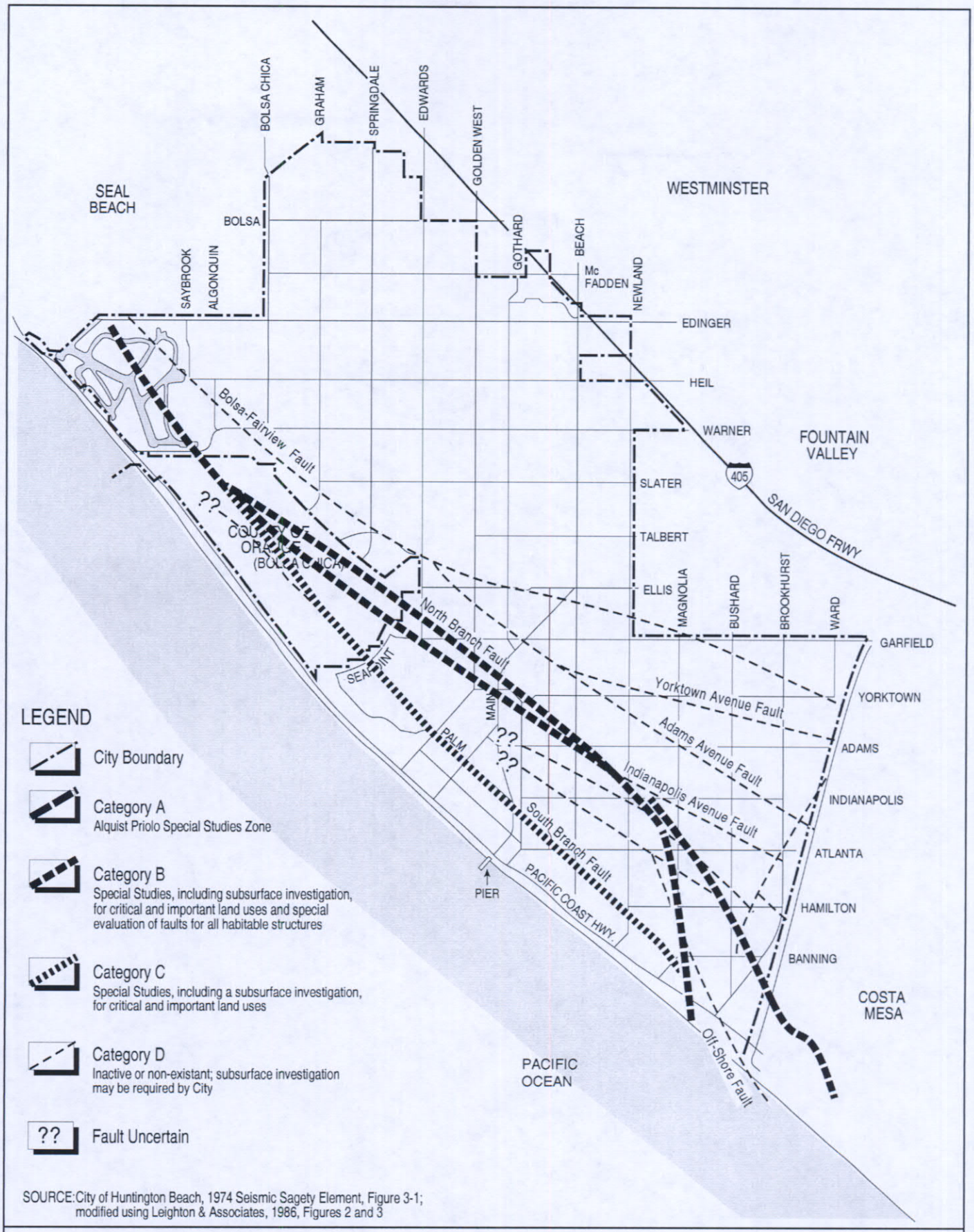

Source: Compiled by Tinsley, J.C., and others, 1985, USGS Professional Paper 1360 , Figure 147; from Sprotte and others, 1980

## NEAR SURFACE WATER

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-27

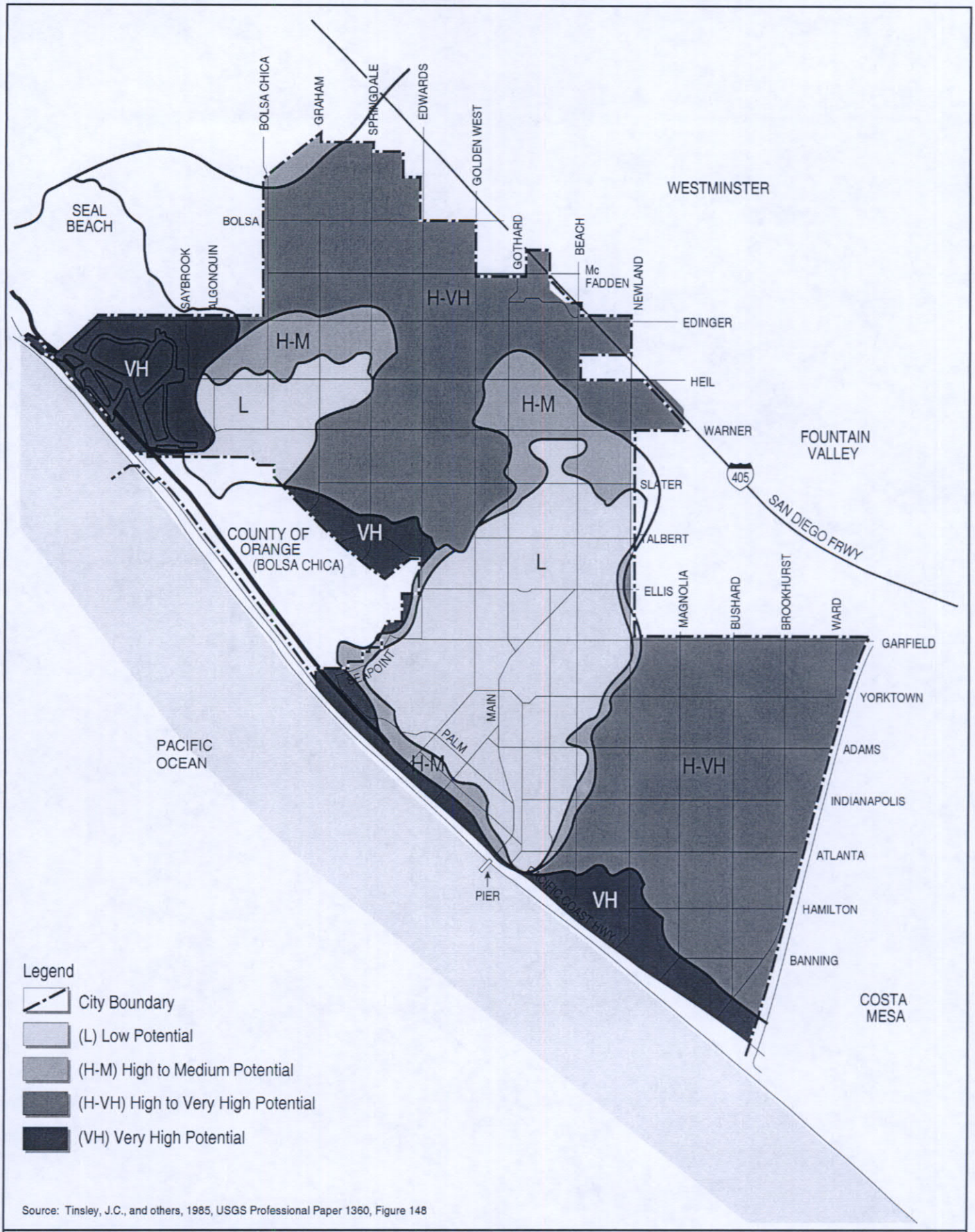



SOURCE: City of Huntington Beach, 1974 Seismic Sagety Element, Figure 3-1; modified using Leighton & Associates, 1986, Figures 2 and 3

# NEWPORT - INGLEWOOD FAULT ZONE

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

FIGURE C-28



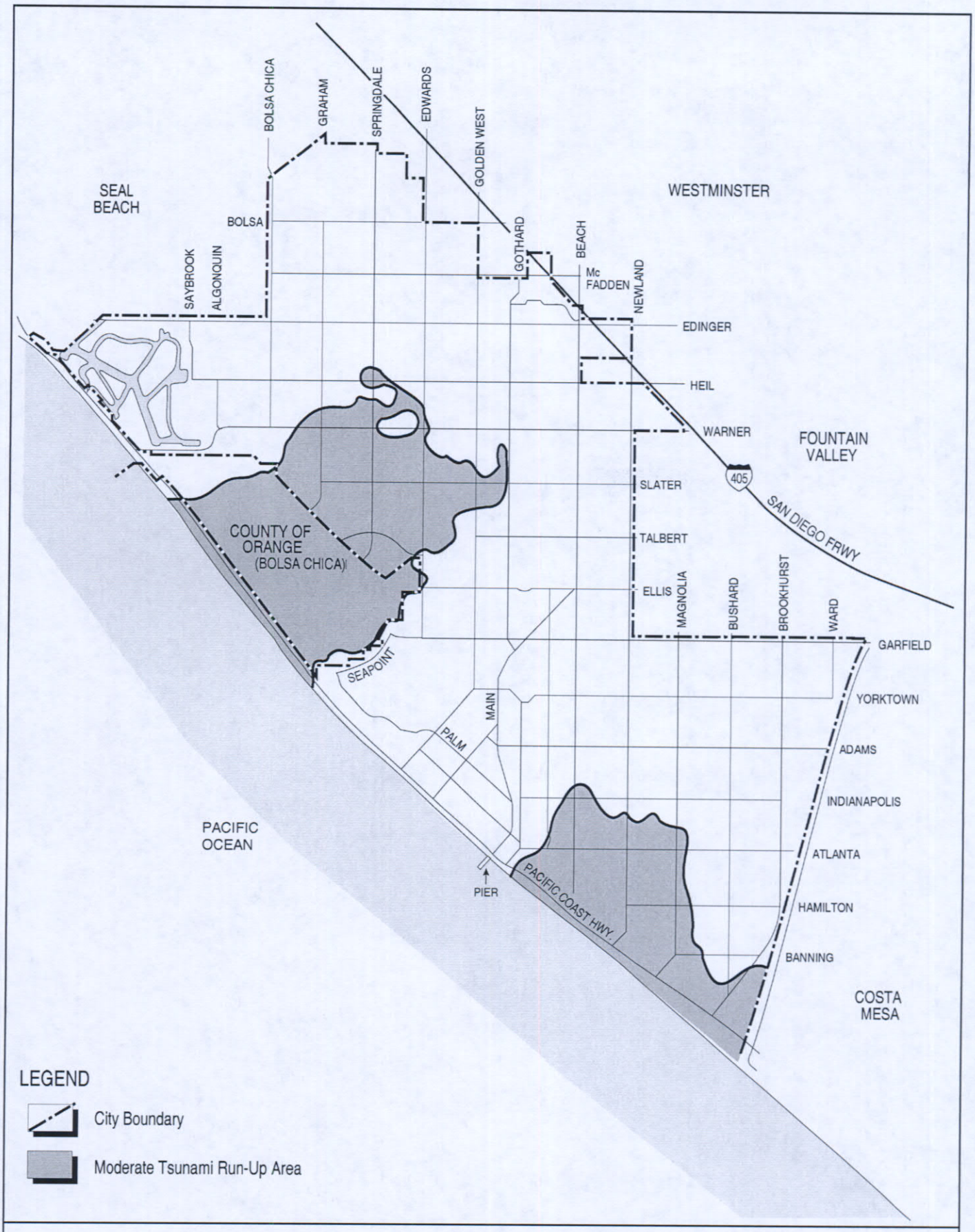

Source: Tinsley, J.C., and others, 1985, USGS Professional Paper 1360, Figure 148

# LIQUEFACTION POTENTIAL

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-29

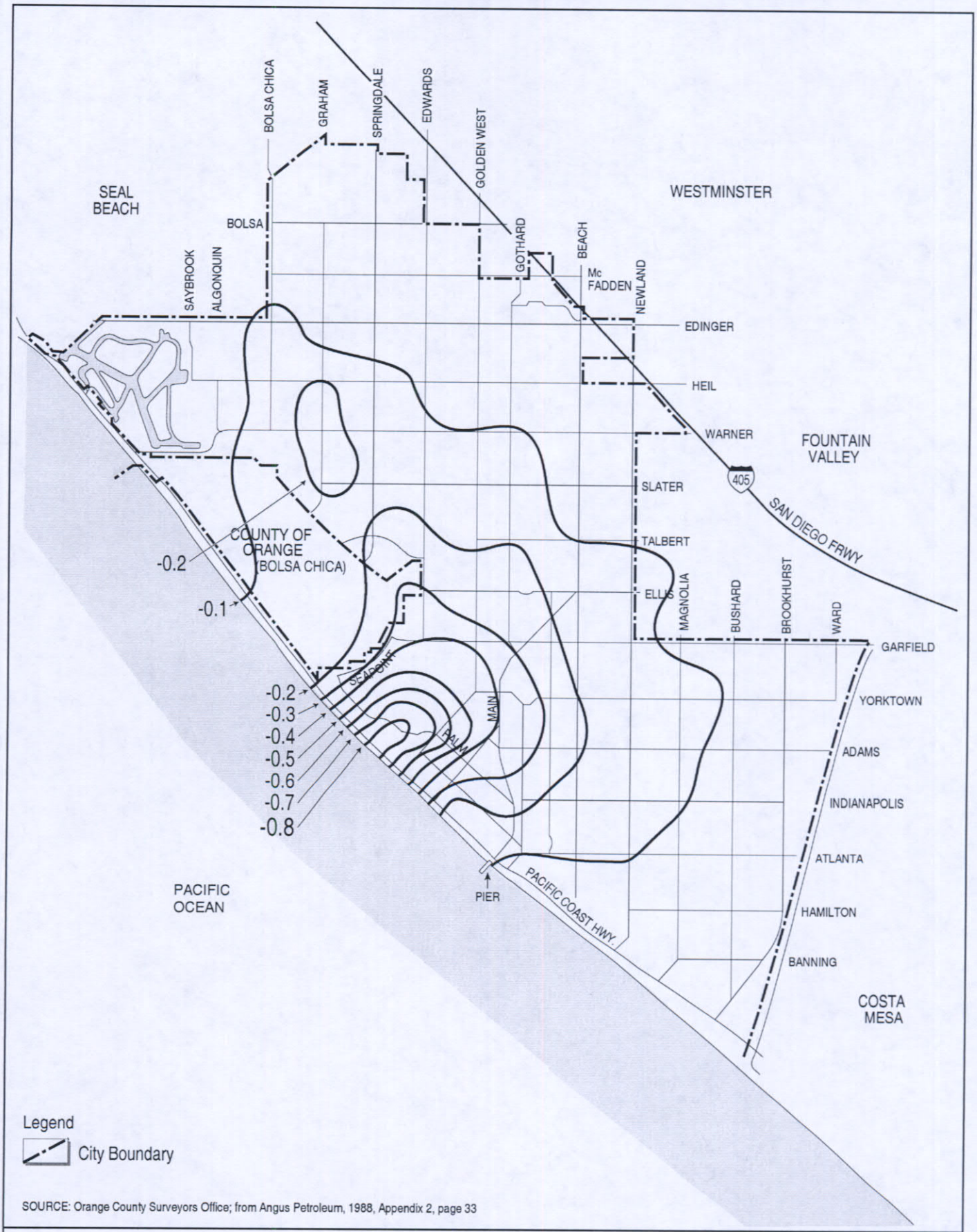



## MODERATE TSUNAMI RUN-UP AREA

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-30



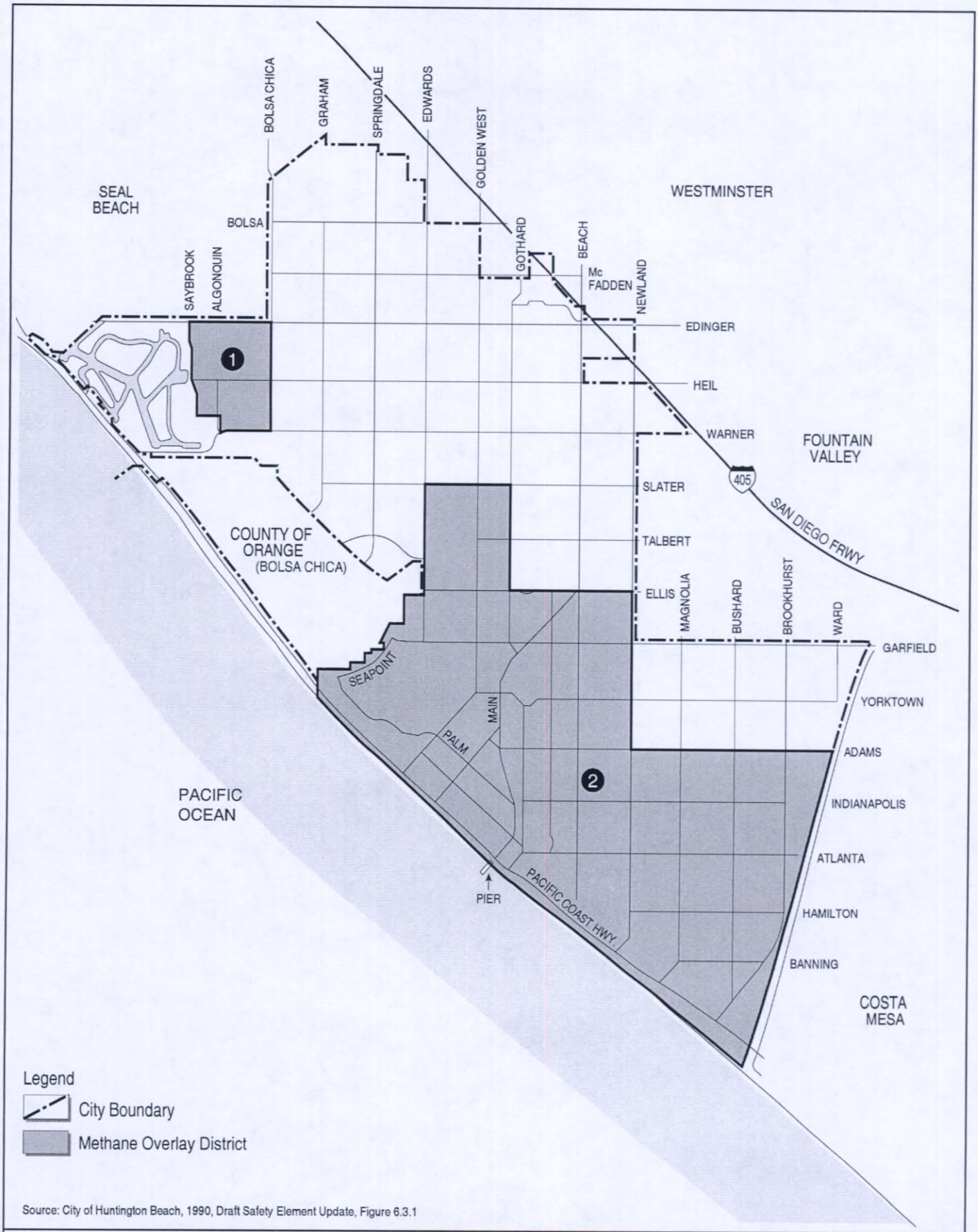

SOURCE: Orange County Surveyors Office; from Angus Petroleum, 1988, Appendix 2, page 33

# SUBSIDENCE AREAS FROM 1976 - 1986

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-31



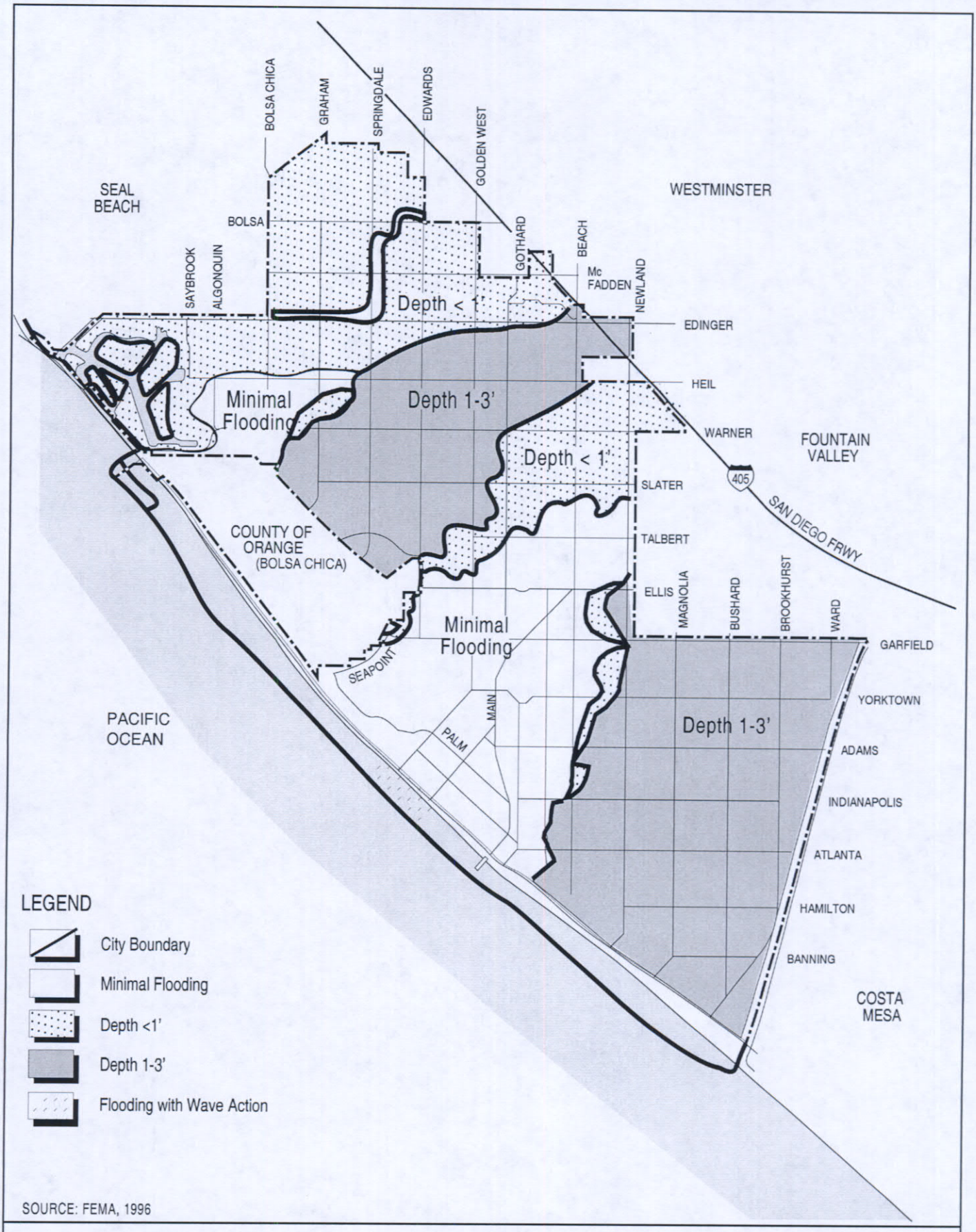

Source: City of Huntington Beach, 1990, Draft Safety Element Update, Figure 6.3.1

# METHANE OVERLAY DISTRICTS

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-32



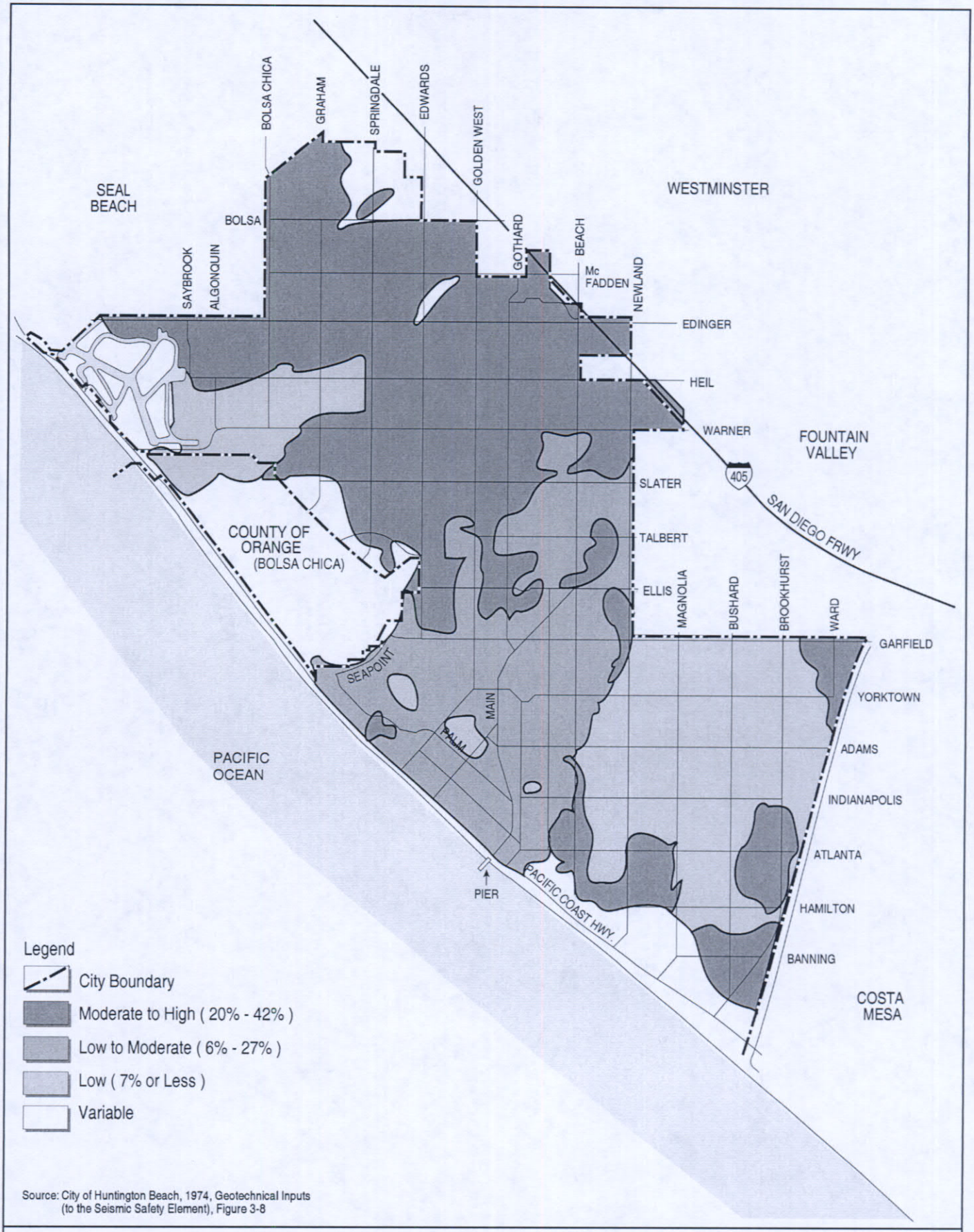

SOURCE: FEMA, 1996

## 100 & 500 YEAR RAIN FLOOD LEVEL

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-33



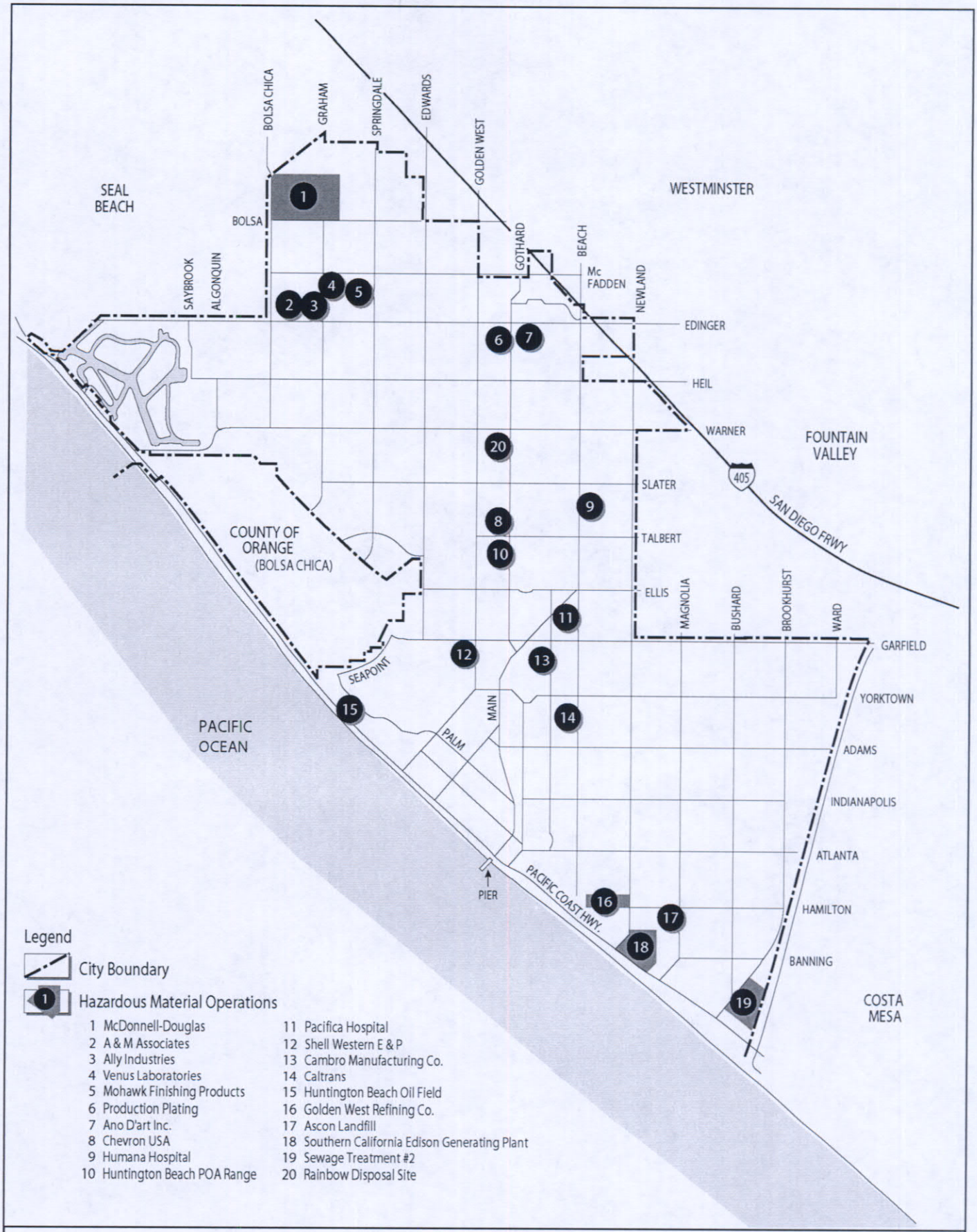

Source: City of Huntington Beach, 1974, Geotechnical Inputs (to the Seismic Safety Element), Figure 3-8

# EXPANSIVE SOIL DISTRIBUTION MAP

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-34




Legend

City Boundary

Hazardous Material Operations

1 McDonnell-Douglas
2 A & M Associates
3 Ally Industries
4 Venus Laboratories
5 Mohawk Finishing Products
6 Production Plating
7 Ano D'art Inc.
8 Chevron USA
9 Humana Hospital
10 Huntington Beach POA Range
11 Pacifica Hospital
12 Shell Western E & P
13 Cambro Manufacturing Co.
14 Caltrans
15 Huntington Beach Oil Field
16 Golden West Refining Co.
17 Ascon Landfill
18 Southern California Edison Generating Plant
19 Sewage Treatment #2
20 Rainbow Disposal Site

# HAZARDOUS MATERIAL OPERATIONS

CITY OF HUNTINGTON BEACH COASTAL ELEMENT

MILES 0 0.5 1.0 NORTH

FIGURE C-35

# ISSUES

The following issues were identified through the Coastal Element update process. The goals, objectives and policies of the Coastal Element are intended to address these identified issues, as well as, the requirements of the Coastal Act.

## Coastal Land Use

1. The number of visitors to the City's beaches is anticipated to rise, thereby increasing impacts on coastal resources, facilities and services. (*C 1.1.4, C 1.2.1, C 1.2.3*)

2. Unregulated Coastal Zone development could impose negative environmental impacts on Coastal Zone resources. (*C 1.1.1, C 1.1.4, C 1.1.5 and C 1.1.7*)

3. Conventional zoning may be inadequate to implement appropriate regulations and design concepts in certain development nodes within the Coastal Zone. Implementation tools such as specific plans and design overlay districts should continue to be used to allow for greater flexibility in protecting unique coastal resources. (*C 1.2.1 and C 1.2.2*)

4. Unregulated seasonal and temporary activities could result in negative impacts on coastal resources. (*C 1.1.6*)

## Shoreline and Coastal Resource Access

### Circulation

5. Overall traffic is anticipated to increase in the City and within the Coastal Zone. (*C 1.2.3, C 1.2.4, C 2.1.2, C 2.3.1, C 2.4.1 and C 2.4.2*)

6. Pacific Coast Highway experiences congestion during summertime peak hours and holiday weekends. Portions of Pacific Coast Highway are proposed to be re-striped to permit an additional lane of traffic in each direction. The re-striping will remove existing on-street beach parking. (*C 2.1.2 and C 2.3.1*)

7. Extending Hamilton Avenue from its existing terminus to Beach Boulevard is proposed. The extension may impact environmentally sensitive habitat areas. Right-of-way acquisition would also be needed. (*C 7.1.4*)

8. Private automobiles create circulation and parking demands. Alternatives to the private automobile as a means of transportation to the City's coastal resources need to be promoted and provided for to mitigate traffic related impacts on coastal resources in general, minimize peak seasonal traffic circulation demands and minimize coastal parking demands. (*C 2.2.1, C 2.2.2, C 2.2.5, C 2.2.6, C 2.2.8, C 2.3.1 and C 2.3.6*)

9. Existing trails/paths need to be maintained, extended and or widened in some areas. (*C 2.2.1, C 2.2.2, C 2.2.5, C 2.2.7 and C 2.2.8*)

10. Bicycle path signs need to be maintained and enhanced to promote the use of bicycles in beach access. (*C 2.1.1 and C 2.7.1*)

11. Future design of the circulation system should focus upon the safety of the pedestrian, bicyclist, and motorist. (*C 2.2.2, 2.8.1 and 2.8.2*)

**Transit**

12. Mass transit opportunities within the Coastal Zone should be convenient and plentiful. The feasibility of locating a transit center within the Coastal Zone should be investigated. (*C 2.3.1, C 2.3.2, C 2.3.3, C 2.3.4, C 2.3.5, C 2.3.6 and C 2.4.4*)

**Parking**

13. Recreational beach parking shortages are experienced about 18 days per year, during peak summer and holiday seasons. (*C 2.3.1 and C 2.4.1*)

14. Re-striping portions of Pacific Coast Highway to increase the number of traffic lanes will remove some existing on-street recreational beach parking. (*C 2.1.2 and C 2.4.1*)

15. Parking conflicts between beach recreational users and residents occur during peak season. (*C 2.3.1, C 2.4.1 and C 2.4.5*)

**Pedestrian Access**

16. Existing shoreline and coastal resource access sites should be maintained. Additional public access, including access for the handicapped, should be provided where feasible. (*C 2.2.2, C 2.5.1, C 2.6.1, C 2.6.2*)

17. Pedestrian access to wetlands, where feasible and appropriate, should be provided. (C *2.6.6 and C 2.6.7*)

18. Pedestrian safety should be a priority when providing coastal resource access. (*C 2.2.2, C 2.2.3, C 2.8.1 and C 2.8.2*)

19. Shoreline access should be provided in the area of Seapoint and Goldenwest. (*C 2.8.3*)

20. Additional public access opportunities to the Huntington Harbour waterways through new development or re-use should be provided where feasible. (*C 2.5.1, C 2.6.1 and C 2.6.2*)

21. Public awareness of existing shoreline and coastal resource access points along the shore and within Huntington Harbour should be promoted. (*C 2.1.1, C 2.7.1, C 2.7.2 and C 2.7.3*)

22. Direct access from the proposed Harriett M. Wieder Regional Park to the shoreline should be encouraged to be included in the park's design. (*C 2.6.5*)

## Recreational and Visitor Serving Facilities

23. The City should promote and provide visitor serving and recreational facilities for a variety of market preferences and cost ranges. Preference should be given to development providing public recreation opportunities. Lower cost facilities should be protected, encouraged, and, where feasible, provided. (*C 3.2.1, C 3.2.2, C 3.2.3 and C 3.3.4*)

24. Hotel/motel rooms, restaurants, visitor serving entertainment uses, etc. are needed to serve visitor serving demand and should be encouraged and provided for. (*C 3.2.4, C 3.2.5 and C 3.2.6*)

25. Overnight camping accommodations for recreational vehicles should be maintained and increased, where feasible, to provide lower cost overnight accommodations. (*C 3.2.6, C 3.2.7 and C 3.2.8*)

26. Existing public recreation sites in the Coastal Zone should be protected and preserved as feasible. (*C 3.1.4*)

27. The City should continue to preserve and promote the Municipal Pier as a recreation and visitor serving facility and coastal related activity node. (*C 3.4.2 and C 3.4.3*)

28. Recreational boating should be promoted and provided for, including appropriate areas for dry boat storage. (*C 3.4.4, C 3.4.5 and C 3.4.6*)

29. Local interests and concerns should be represented and included in State and regional recreation planning within the Coastal Zone. (*C 3.5.1, C 3.5.2 and C 4.6.5*)

30. The long-term fiscal and liability impacts of new or expanded municipal recreational facilities within the Coastal Zone should be analyzed and considered before approval. (*C 3.3.1*)

## Visual Resources

31. Significant public coastal view corridors should be identified, preserved and maintained. Private coastal view corridors should be encouraged. However, private views are not protected by Coastal Act or City policy. (*C 4.1.1, C 4.1.3, C 4.2.1, C 4.2.2, C 4.2.3 and C 4.2.4*)

32. Coastal bluff top vistas should be preserved. (*C 4.2.1, C 4.2.2 and C 4.2.3)*

33. The natural landform of the coastal bluffs should be preserved and protected. (*C 4.4.1, C 4.4.2, C 4.4.3 and C 4.4.4*)

34. The scenic and visual quality of Pacific Coast Highway and other coastal routes could be enhanced through sign regulation, landscaping and design review of new development. (*C 4.2.1, C 4.2.2, C 4.2.5, C 4.3.1, C 4.5.1, C 4.5.2, C 4.5.3, and C 4.6.4*)

35. Visually degraded areas in the Coastal Zone should be enhanced. Design review, placing transmission lines underground, screening the electrical energy generating plant and oil

facilities, preserving mature trees, and litter control should be promoted to enhance the aesthetic quality of the City's scenic coastal resources. (*C 4.2.1, C 4.5.1, C 4.5.2, C 4.6.1, C 4.6.2, C 4.6.3, C 4.6.6, C 4.7.1, C 4.7.2, C 4.7.3, C 4.7.4, C 4.7.5, C 4.7.8 and C 8.4.2*)

36. The Coastal Element Land Use Plan should maintain natural areas and enhance them, where feasible, as aesthetic amenities, as well as, biological resources. (*C 4.1.2, C 4.1.3, C 4.4.2, C 4.4.3 and C 4.4.4*)

37. In order to maintain public views from the municipal pier, as well as, public access to the pier, building heights on the pier should be limited to a maximum of 2 stories, or 35 feet, and public access should be maintained around the entire perimeter of the pier. *(C 3.4.3)*

## Historic and Cultural Resources

38. New development could negatively impact significant historical and archeological resources in the Coastal Zone. Such resources should be identified in coordination with the State historic preservation officer and reasonable mitigation measures for protection or enhancement should be required. (*C 5.5.1 and C 5.1.2, C 5.1.3, C 5.1.4 and C 5.1.5*)

## Water and Marine Resources

39. Activities associated with an urban environment may impose negative environmental impacts on marine resources in the Coastal Zone. (*C 6.1.3, C 6.1.5, C 6.1.6, C 6.1.12 and C 6.1.13*)

40. Water quality should be monitored, protected and enhanced, where needed, to protect marine related resources. (*C 6.1.1, C 6.1.2 and C 6.1.8*)

41. Monitor and improve, if necessary, water quality in Huntington Harbour with additional boathead regulation and expanded aeration strategies. (*C 6.1.9, C 6.1.10 C 6.1.11 and C 6.1.21*)

42. Runoff and storm drain-related pollution should be minimized through strategies such as regulation of new development and strict enforcement of NPDES regulation. (*C 6.1.1 and C 6.1.6 and C 6.1.16*)

43. The City's freshwater aquifers need to be protected from pollution and saltwater intrusion. (*C 6.1.1*)

44. Water conservation should be promoted. Strategies such as requiring conservation measures in the design of new projects, the use of reclaimed water by the City for irrigation purposes, where feasible, and investigating the feasibility of desalinization of sea water for potable usage should be considered. (*C 6.1.12, C 6.1.13 and C 6.1.14*)

## Environmentally Sensitive Habitats

45. Sensitive habitat areas need to be protected from impacts associated with development and urbanization. (*C 3.1.1, C 3.1.2, C 6.1.2, 6.1.20, C 6.1.21, C 6.1.22, C 7.1.1, C 7.1.2 and C 7.1.3*)

46. Oil and toxic material spills are a risk to sensitive habitat areas. Adequate emergency plans and increased inter-agency coordination are needed. (*C 8.1.4, C 8.2.8, C 8.2.9, C 8.2.10 and C 8.3.10*)

47. Wetlands provide biological and aesthetic resources. These qualities should be maintained, enhanced and improved, where feasible. (*C 6.1.24, C 6.1.26, C 6.1.28, C 7.1.2, C 7.1.3, C 7.2.1, C 7.2.2, C 7.2.3 and C 7.2.4*)

48. Pedestrian access to coastal wetlands and sensitive area via boardwalks, peripheral trails, interpretive facilities and other appropriate educational facilities should be promoted where such activity would not disrupt habitat values or impair ecosystem viability, consistent with Sections 30233 and 30240 of the Coastal Act. (*C 2.6.6, C 2.6.7 and C 7.3.1*)

49. Public awareness of sensitive habitats and their environmental benefits should be promoted. (*C 2.7.1, C 6.1.28 and C 7.3.1*)

## Energy Facilities

50. Huntington Beach accommodates energy related facilities within its Coastal Zone. The potential adverse safety, aesthetic and biological impacts of these facilities to the community and its coastal resources must be minimized to the maximum extent feasible through municipal regulation and coordination with responsible outside agencies. (*C 8.1.1, C 8.1.2 and C 8.1.3*)

51. The community and its valuable coastal resources are at risk from oil spills from offshore tanker activity and on and offshore facilities. The risks must be minimized through municipal regulation and coordination with responsible outside agencies. (*C 8.1.4, C 8.1.8 and C 8.3.12*)

52. Increased and/or new tanker operations should be discouraged due to potential oil spill risks from tanker activity. The City should monitor and participate in the review of any proposed re-activation or expansion of the existing marine terminal. Re-activation and/or new marine terminals in Huntington Beach should be discouraged. (*C 8.3.6, C 8.3.7 and C 8.3.8*)

53. In the event of oil spills, adequate contingency and clean-up plans must be in place. (*C 8.1.4, C 8.2.8, C 8.2.9, C 8.2.10, C 8.3.10 and C 8.3.12*)

54. Unitization, and consolidation of energy facilities should be encouraged to increase efficiency and safety, and minimize aesthetic and biological impacts to coastal resources. (*C 4.7.7, C 8.2.3, C 8.2.5, C 8.3.5 and C 8.3.14*)

55. Compatibility between energy related facilities and other land uses could be increased through the use of buffers, screening and setbacks. (*C 4.7.8, C 8.3.4, C 8.3.10, C 8.3.15 and C 8.4.1*)

56. Access to underground oil resources from surface areas should be protected and maintained. (*C 8.1.9 and C 8.4.4*)

57. New energy technologies such as advanced oil recovery methods and solar technology should be encouraged, promoted and explored. (*C 8.2.1, C 8.2.2, C 8.3.1, C 8.3.2 and C 8.3.3*)
58. Beach access and aesthetics could be improved through energy facility consolidation, improved maintenance of energy facilities, screening and buffering. (*C 4.7.8, C 8.2.3 and C 8.3.5*)

59. Encourage clean-up efforts of the NESI (Ascon) site which is listed on the California State Superfund list. Do not permit development of the site until clean up and decontamination efforts have been completed. (*C 4.7.10 and C 8.4.5*)

60. Adequate interdepartmental coordination within the City, as well as, interagency coordination between the City, other levels of government and outside agencies regarding energy related issues affecting the City is paramount to ensuring public and environmental safety. (*C 8.1.1, C 8.1.2, C 8.1.3, C 8.1.5, C 8.1.6 and C 8.1.7*)

## Water, Sewer and Drainage

61. Existing water booster, storage and distribution systems are inadequate to meet the needs of potential future development in the Coastal Zone. (*C 9.1.2*)

62. Existing sewerage distribution systems in the Coastal Zone are aged and in need of upgrade and maintenance. (*C 6.1.4, C 9.1.2 and C 9.1.3*)

63. Existing flood drainage channels and pumping facilities are inadequate to accommodate a 100 year flood event. (*C 9.1.2*)

## Hazards

64. The City's Coastal Zone includes potential geologic and flood hazard areas. Potential risks can be minimized through land use regulation and design review. (*C 10.1.1*)

## Administration/Interagency Coordination

65. City participation in the planning and review of State, federal and regional plans for improvements to facilities or areas within the City's Coastal Zone is imperative and should be pursued to ensure consistency with Coastal Act policies and City of Huntington Beach policies and concerns. (*C 11.1.1*)